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Final ACO rule includes several changes favorable to hospitals

Facilities may find requirements to be less burdensome

More often than not, when the Centers for Medicare & Medicaid Services (CMS) issues a proposed new rule, the comment period is opened and several months later a final rule emerges that bears fairly close resemblance to the original. In the case of CMS's final rule on accountable care organizations (ACOs), however, its recent unveiling showed several significant changes — and hospital professionals couldn't be more pleased. *(For information on what an ACO is and how it works, see "Accountable care organizations in 'very early stages' of growth," HBQI January 2011, p. 1, and "CMS draws mixed reviews with the release of proposed ACO rules, HBQI June 2011, p. 61.)*

"I think the agency really heard the comments from the provider community, and we're hearing that folks are very satisfied with a lot of the changes," says **Amanda Forster**, senior director, public relations for Premier Healthcare Alliance.

One of the biggest changes she says Premier is "very supportive of" is CMS's modification of the whole approach to risk. "There is now a no-downside risk option, which is a big change and very welcome," she says.

In earlier versions of the rule, there were to be two tracks of risk and reward for participating groups, with the first track defining lower risks and reward than the second track. However, several groups argued that the first track should be risk-free, in light of the

KEY POINTS

- Downside risk option is removed, helping to ease burden of startup costs.
- Greater focus seen on improving care after discharge, periodic following-up with patients.
- Core quality measures differ from those traditionally set out by CMS.

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high startup costs for an ACO (some estimates put them at nearly \$2 million), and CMS responded by eliminating risk in the first track.

“As we learned through our collaboratives, different providers are at different points on their journey, and some are less risk-averse,” says Forster. “This change really helps encourage some levels of participation, as more conservative organizations may need more capital on-hand. Essentially, it means CMS will allow you to join the shared savings program and if for whatever reason you do not achieve savings you will not be liable for those expenditures.”

The way it worked in the proposed rule, she

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EDITORIAL QUESTIONS

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explains, was that you had to assume some risk in three years — even with the Track One option. “If your spending was higher than the targets, you would owe CMS money; there was a lot of push-back because many facilities were not experienced or able enough,” says Forster.

Other financial benefits

There are other changes that will help hospitals financially, says Lisa Grabert, senior associate director for policy at the American Hospital Association. “The biggest change is found within the incentive section,” she says. “Originally the scale was tipped a little toward CMS in taking the lion’s share of the bonuses being generated from the program, and they significantly backed away from that in the final rule.” The final rule, she says, will allow hospitals to get back a greater portion of the up-front investment they have to make to become an ACO.

“This was a change we really needed to see; previously there was a 2% threshold CMS would take right off the top, but instead of doing that the finalized ACO rule enables hospitals to share in first-dollar savings,” Grabert says.

Forster is also supportive of the new approach to first-dollar savings. “This represents very big savings in terms of funding an ACO, and CMS deserves a lot of credit in terms of being more realistic,” she says.

Quality requirements “more manageable”

Forster also responded positively to the reduction in the number of quality measures ACOs would have to report — from 65 to 33. “They have made it much more manageable,” she says. “Now, they can be phased in over time — it’s not too big a bite. ACOs can get their feet wet, and learn over time.”

Grabert agrees. “First, it allows people to concentrate on more of a core set of measures so they can really affect change; a much broader set might be much more difficult to get your hands around and produce real quality improvement,” she says. “In addition, collecting quality measures is pretty burdensome and costly — so with a smaller set you’ll not only see greater improvement overall but it will be less financially burdensome.”

One of the reasons more core measures would be so burdensome, she explains, is that there is “not a whole lot of overlap” between these mea-

asures and the more traditional CMS core measures, or those of The Joint Commission. “This is more about managing populations rather than inpatient care, so the measures are a lot different,” Grabert says.

Speaking of quality, Forster sees “a huge, huge role” for quality managers as ACOs start forming. “Central to all of this will be ensuring a quality experience, so when someone has a condition and requires a hospital stay you want to make sure there is no harm, no infection, no stinting on care that would result in a readmission,” she says. “The quality folks have a role to play in ensuring the ACO achieves those measures; a high-quality hospital system is needed.”

“One of the benefits of the Affordable Care Act (of which ACOs are a part) is the increased emphasis on quality; it heightens the profile of quality because it is more tied to reimbursement,” Grabert says. “Specifically, the role of quality within the ACO program is that your scores will yield a higher or lower sharing rate in terms of the overall bonus you can generate, so [the quality manager is] a really critical component of the ACO.”

Accountability is key

On the larger scale, what will the advent of ACOs mean for hospitals and patients? “I think overall we’re asking our members to focus on the first two words — accountable care,” says Grabert. “The whole ACO concept has helped our members grasp that concept more. They’re looking beyond what they provide to patients outside the four walls of their facilities and trying to improve upon care after discharge, and periodically following up with patients. They’re going above and beyond what they have traditionally been reimbursed for.”

“From the perspective of our members — and we have two collaborations of hospitals and systems working to put these sorts of capabilities in place — we have learned that the fee-for-service model can be very limiting,” says Forster. “You’re not as able to coordinate care, and it’s tougher to align incentives.” Under this model, she continues, “it’s no secret that all these payments are in line for future cuts by Congress. A lot of people are saying that’s just not a sustainable system, and we need to look at alternatives.”

The ACO model, says Forster, “creates those incentives so providers are able to coordinate care

better and work as a team. In the past you had things like Stark and anti-trust that kept providers separated and silo-ed. This is our first opportunity to take that leap.”

The change, she continues, will also be good for patients. “People will really like their care under these new models,” she says. “They are very person-centric, and intended to be customized. The patient will feel they are an integral member of the care team and everyone will work together to make sure you have the best possible outcome.”

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Program improves hand hygiene compliance

HAI, mortality rates reduced in PICU

An infection prevention program in a large pediatric intensive care unit successfully reduced hospital-acquired infections and improved mortality rates among children admitted to the unit in 2007–09, according to a recent paper in *Health Affairs*¹. The program, which involved improved practices in hand hygiene, oral care, and central-line catheter care, resulted in:

- 2.3 fewer days in the hospital per patient;
- a reduction in hospitalization costs per patient

KEY POINTS

- Program begins with review of recent performance and of existing literature.
- Line dressings and access lines were the foci of practices changes.
- Leaders remind staff members when they fail to follow best practices.

of \$12,136;

- mortality rates 2.3 percentage points lower, compared to patients admitted before the interventions.

“Selling a change in practice is not easy,” says **Bradford D. Harris, MD**, who is currently a medical officer at the Food and Drug Administration in Silver Spring, MD, but at the time of the initiative was a practicing intensivist who spearheaded the program.

The initiative began, he recalls, by reviewing how many infections the unit had, and by reviewing existing literature. “Fortunately there’s a good body of literature out there, so we looked at the evidence and saw what seemed to work consistently,” says Harris. “We noticed, for example, that the IHI bundle did not include oral care, so we included that in our bundle.”

Harris explains that oral care involves scrubbing the patients’ teeth and tongues every four hours, and at least twice a day using antimicrobials. “This helps eliminate the colonization of hospital pathogens and keeps inflamed gums down — which makes a big difference,” he says.

In terms of reviewing recent performance, Harris’s team found that while there had been 32 infections in the prior year, only one was insertion-related. “Everything else had occurred a minimum of three to seven days out, so we were clearly not following the best practice in terms of how to care for line dressings and access lines, so they became the foci of how we changed practices,” he says.

Observation is instructive

The next step, Harris says, was “to see what we were actually doing.” Since his entire team worked in the unit, they all observed what was going on. “One thing that became very apparent quickly was that people were not washing their hands,” he says. “So this became central to both projects [oral care and catheter care].”

An initial staff survey was conducted, asking staff members what they considered to be most important. “After getting our preliminary data, we set up focus groups and asked what they were thinking about, and showed them our hand hygiene compliance; the fact that only 30% of the staff were compliant with keeping the head of the bed elevated; and that oral care varied tremendously depending on the nurse, the day, and the shift,” says Harris. “It really became clear to us what we had to target.”

In addition to the variation that was found, Harris reports “some pretty shocking quotes” in the focus groups. For example, he notes, one individual said, “It’s not my grossness — it’s theirs.”

This was an eye-opener for the team, he admits, and it “really got discussions going.”

Reminding staff

The next step, says Harris, was to monitor whether staff members were washing their hands, and mentioning it when they weren’t. “We’d say something like, ‘I see you’re not washing your hands; would you mind doing it?’” he says.

There was “a lot of resistance all the way around,” says Harris, but by enlisting some managers to do observations of their own units, monitoring became educational. “They’d come back and say, ‘Yeah, we’re not doing so well,’” he says.

The process was also educational because sometimes failure to wash hands was just the result of staff members not knowing they were supposed to do so between certain processes. “This really helped,” Harris says. “And when they saw me and other doctors back them when confronted by outside groups it sent the right message.”

For the two projects, says Harris, a large educational fair was held, which involved information on oral care, what constitutes good hand hygiene, and how to access central lines. “We launched the fairs on all shifts and also followed up with daily and weekly audits,” says Harris. Again, he notes, staff members were notified when they were not being compliant.

“It was clear they were getting a lot of pushback from people who were not based in the unit,” Harris says. “I then got a lot of support from epidemiology, which would send the offending person an e-mail. If that did not work, a second e-mail went to them and their supervisor. The next step, if necessary, involved backup from the chief medical officer and the nursing officer, so clearly there were teeth behind it.”

Additional aids provided

Harris says the team also provided the staff with pre-packaged oral cleaning kits that were hung on the walls of each room. “They were a visual reminder,” he explains. “They facilitated change in the process and made it convenient, too.”

When it came to hand hygiene, he continues, his team noted that while there were sinks in the

room, the alcohol foam was located outside the room. “We put Purell gel containers right on the nurse’s work station and on the ventilators,” he says. “This was also convenient and a visual reminder.” In addition, he says, the team has reinforced good behavior. “We say ‘Thanks, I saw you wash your hands — that was great!’” he says. “It’s really helpful for people who resist at the beginning to say ‘Good job.’”

As for other keys to success, Harris says one was identifying champions on the unit that got on board from the beginning. “The other is that it’s absolutely critical to have the nurse administrator backing it,” he says. As an example of what a champion can mean, he notes that it took him six months to get the hospital to allow the purchase of the oral care kits. “I got the company to agree to supply us for two months for free, but then I told the chief medical officer I needed his help to get this through purchasing — and he did,” Harris shares.

[For additional information contact Bradford D. Harris, MD, Food and Drug Administration, Silver Spring, MD at (919) 593-0755.]

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Program aims to improve communications

Patients given photos of members of their care team

With The Joint Commission and other organizations noting that poor communications are often at the heart of bad outcomes and that care must become more patient-centered, it’s not surprising that facilities are seeking to improve the ways that providers deliver information to and share care plans with their patients. One such initiative — at the University of Colorado Denver/Anschutz Medical Campus’s Acute Care for the Elderly (ACE) Service — involved the education of hospitalists about the importance of introducing themselves and ensuring that patients understood who the members of their team were.

“Physicians take for granted that their patients

know who they are and what their role is in the patient’s hospital care, but in fact when you look at the literature you find this is not the case at all,” says ACE director **Ethan Cumbler, MD, FACP**. “One of the eye-opening articles for me appeared in the *Archives of Internal Medicine* (2009) — ‘The ability of hospital patients to identify their in-hospital physicians’ — which found that 75% of the patients were not able to identify any of their physicians, and that of the 25% who were, 60% of them were wrong.” Such studies, says Cumbler, “really highlight the kind of communication deficits that exist between patients and hospitals.”

Such lack of understanding, he continues, extends to patients’ lack of understanding what the plan for the day is. “We did not look to get at specific detail, but at the global concept of how well we communicate with patients, starting with who we are and explaining our role in the care of the patient, and then extending it to what our care plan is for the patient,” he says. “All of these are prerequisites for involving the patient in being an active participant of their care plan.”

Using communication tools

The hospitalists’ education involved different tools and three basic communication strategies, says Cumbler. “All of them were reviewed in writing and in orientation to the service for new members,” he says.

The first strategy is to provide a handout, which includes the names and pictures of the members of the care team, and also establishes expectations of care, such as when the patients should expect to see their doctor. It also asks that patients bring up questions, and that invited family members be part of the discussion on rounds.

“We now customize the handouts each month to show those providers who will be participating in the patient’s care — hospitalist, resident, intern, medical student,” says Cumbler.

KEY POINTS

- Physicians should not assume that patients know the care team and their roles.
- White boards in patients’ room are used to help communicate the care plan.
- New elements are incorporated into the routine physical exam.

The second strategy involves the use of white boards in the patients' rooms. "When we go in and do team rounds, we work on team communications," Cumbler says. "While one person is talking with the patient, another will be writing the plan on the board." This is important, he explains, because: A) Communication in writing is more durable than something you say in person; and B) Oftentimes other family members come in and ask what the plan is, so it's good to have that written reminder.

"I think we've all had that experience of going into an emotionally charged high-stakes discussion with a doctor and as you come out of the room you do not remember all the things that were said," Cumbler observes. "I tell my own family members to take notes, and I do the same with my patients and their family members."

The third element is the action plan, based on a technique developed by one of the hospital staff. "He had a patient that went down for a procedure and declined it," Cumbler shares. "When he was asked why, he said 'I did not know I was going to get it so I said no.' The doctor realized that while we had discussed the procedure among ourselves we had not discussed it with the patient."

A part of the routine

So now, when hospitalists enter a patient's room they introduce themselves, and then go through their normal routine, asking the patient how he or she feels, conducting the physical exam, discussing the care plan, as well as potential future events that may be happening during their stay. "The last thing we do after asking the patient if they have any questions about the care plan is a scripted communication," says Cumbler, adding that it involves bullet points on the concrete things the patient should have happen that day. "We should remember the last thing the best," he says.

The program appears to be effective. "Anecdotally, we did a survey of patients' experience as part of a 360-degree evaluation of our ACE program in January-March 2008," Cumbler says, noting that there were positive responses when asked if the doctors did a good job of managing patients' problems, and whether their opinions were respected by the team.

"These strategies as part of an interdisciplinary model that emphasizes team communications are noticed by patients and did appear to improve patient satisfaction with the quality of communi-

cations," says Cumbler, noting that the satisfaction levels were significantly higher than those of another group of patients that was not part of the ACE program.

"We had several goals in creating the handout," Cumbler says. "We felt we could and should do a better job communicating with patients — not only who we are and our role, but also what they could expect of us, and when they should be able to expect to see us. We also wanted to include expectations of the patients, and involve the family in the care plan and be active participants — not only physically, but in asking questions."

Ultimately, he continues, he wants to get the patients more actively involved in participating in their care plans. "What we really want is for our elderly patients to be participants, and not simply recipients, in their medical care," says Cumbler. Apparently, he says, that goal is being achieved. "I have patients who, when I go into their room, show me the sheet and say, 'Don't worry, I already walked twice today,' or make some other reference to the handout."

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Intervention lowers hospital readmissions

Coaches empower patients in self-care

Medicare spends about \$17 billion a year on hospital readmissions that could have been prevented, experts say.

About one in five Medicare fee-for-service patients are rehospitalized within 30 days of being discharged from the hospital. In the best-functioning hospitals, about 5% to 8% are readmitted; in some hospitals, nearly one-third of Medicare patients have a readmission within 30 days post-discharge, says Stefan Gravenstein, MD, PhD, clinical director of Quality Partners of Rhode Island and professor of medicine and community health at Brown University, both in Providence, RI. Quality Partners is a nonprofit organization established to be a Medicare improvement organization for the state of Rhode Island.

Gravenstein and other researchers decided to

test an intervention to reduce 30-day hospital readmissions among this population. It is based on the transitional care work and randomized controlled trial by Eric Coleman, MD, MPH, professor of medicine with the Divisions of Health Care Policy and Research and Geriatric Medicine with the University of Colorado, Denver.

The intervention involves having coaches meet with and call patients to empower them to access community providers when their symptoms begin to show trouble, rather than waiting until they are very sick and need to be hospitalized.

“Eric Coleman, who is a geriatrician and science professor, demonstrated a few years ago that if you taught patients basic skills, they could self-manage and speak up for health care when they needed it,” Gravenstein says. “He called it the care transitions intervention and demonstrated that it resulted in more than a 30% reduction in readmissions among older patients.”¹

The logical follow-up to Coleman’s work was to try the intervention in a real-world setting, which is what Gravenstein and co-investigators did in a new study that found a significant reduction in 30-day readmission rates for patients ages 65 years or older. Individuals who received the intervention had a 30-day readmission rate of 12.8%; those who did not receive any part of the intervention had a 20% readmission rate. And an internal control group of people, who declined to participate or who were lost to follow-up before having a home visit, had a readmission rate of 18.6%.²

In addition to educating patients and empowering them to be more proactive with their health care needs, the system needs providers to be ready to see patients immediately, in order to work, according to Gravenstein.

“The backdrop system has to be ready so when doctors get the phone call from patients, they can say, ‘Yeah, we have a spot for you,’” Gravenstein says. “Hospitals have to notify primary care physicians and give them information that supports successful coaching.”

“As a real-world intervention, we wanted to offer this to as many people as possible, given our resources,” says **Rachel Voss**, MPH, program coordinator of Quality Partners of Rhode Island.

“We did find similar to Coleman’s results a 36% reduction in the readmission rate when compared to people we had never approached about this intervention,” Voss says.

The study selected a random sample of the tar-

geted population, but was not designed as a randomized controlled trial.

“As a Medicare-funded pilot program, we hired coaches to work with six hospitals and work with any patient who was cognitively intact and discharged from the hospital to the community,” says **Rosa Baier**, MPH, senior scientist at Quality Partners and a teaching associate at Brown Medical School.

The coaching intervention was based on the four pillars of Coleman’s model: medication management, a patient-centered record that the patient maintains for transferring information to various providers, timely follow-up appointments, and watching for and responding to red flags or warning signs and symptoms.¹

“The coaches do not do the work for the patient, but empower patients to take care of themselves,” Voss says. “They guide people at home through medication reconciliation, and they teach them to reach out to their physicians so they can self-manage properly.”

The intervention spans a 30-day period and has the coach make a hospital visit, a home visit within three days of discharge, and two follow-up telephone calls within the first week and the first four weeks post-discharge. Patients receive a booklet for recording their personal health record, including their main health problems, medications, and questions for their doctors.¹

Coaches are not the same as nurses, Gravenstein notes.

“When you send a nurse to the home, the nurse may notice the patient has swollen legs, and the nurse might have the patient increase the water pill,” he says.

“Coaches, instead, help patients recognize when something is going wrong and how to reach into the provider system to get the help they need,” he adds. “So if the coach sees the patient, and the patient says, ‘My legs are swollen; what do I do?’ The coach helps them reason through that problem and realize that it’s okay to call the doctor and arrange for an appointment in the next couple of days.”

Often Medicare patients will ignore their symptoms or put off a doctor’s appointment until the problem is exacerbated and requires an emergency room or urgent care facility visit, Gravenstein says.

“They say, ‘I can just wait,’” he explains. “For an 80-year-old with heart failure, that means a 911 call.”

For purposes of the study, the coaches were nurses and social workers, Voss says.

“In theory, they don’t need to be nurses because they’re not supposed to use nursing skills,” she adds. “We have other projects similar in style to this intervention where coaches are not nurses; they have some familiarity with the health care system, but they don’t have the level of background as nurses, and they’re still as effective at the intervention of empowering patients.”

Coaches teach patients to use their common sense, Gravenstein says.

“If your toe is swollen, you don’t need a nurse to tell you that your toe is swollen and somebody should take a look at it,” he says. “You need common sense to say, ‘I need to have someone take a look at this.’”

People who are health literate already have these self-empowerment skills, he adds.

“You want the patient to own these decisions about when to generate an encounter with the doctor’s office,” he says. “You’re teaching them to fish rather than giving them a fish.”

Outreach is a main skill patients are taught. Also, coaches push patients to make those appointments sooner rather than later, Gravenstein says.

“The coach’s job is not to catch every problem that arises, but to teach the patient to recognize and do outreach for help when it arises,” Baier says.

Patients receive the personal health record in the hospital where they are taught how to understand their medication list, Voss says.

“Patients write down the medication information in their personal health record, so when they get home they have a written record in their own handwriting that they can match up with all the bottles on their table and in their cupboards, as well as with their discharge instructions,” she explains.

Patients can share their personal care journals with their community providers. This helps facilitate information transfer across health settings, so that providers have the right information about a patient’s health status and recent hospitalization, Baier says.

They also can list their symptoms and warning signs in the record.

“It’s a touch point for communication for health care providers,” Gravenstein says. “Our role is to engage these various providers to make sure these things happen.”

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QI process pin-points delays at point of entry

Health system finds opportunities for improvement

Faster throughput can clear waiting rooms and boost patient satisfaction, but there are also instances where time-to-treatment can make a critical difference in outcomes. For example, for patients suffering from ST-segment-elevation myocardial infarctions (STEMI), the most severe form of heart attacks, every 15-minute delay in providing balloon angioplasty to clear blocked arteries results in a 1% increase in mortality, according to **Ehtisham Mahmud**, MD, co-director of the Sulpizio Cardiovascular Center at the University of California, San Diego, and chair of the UC San Diego Health System’s door-to-balloon time committee. Treatment delays for STEMI patients can also lead to severe complications, including arrhythmia, heart failure, and chronic debilitation, adds Mahmud.

This is why the UC San Diego Health System has made door-to-balloon time for STEMI patients a constant target for improvement. And these efforts have paid off handsomely: In the past year, the health system, which includes three EDs, has brought average door-to-balloon times down to less than 60 minutes, beating national recommendations by more than a third, say hospital administrators. While such an improvement requires institutional leadership and commitment, sources from UC San Diego say there is no reason why other EDs cannot follow a similar roadmap to success.

Analyze the process

For one thing, it’s not hard to get clinicians to rally around a goal with such clear benefits, explains **David Guss**, MD, chair of the Department of Emergency Medicine at UC San

Diego. “Improving time from door to balloon [for STEMI patients] has real impact on patients and saves lives, so it is one of those goals that is associated with something meaningful,” he says.

To tackle the issue, UC San Diego established a multidisciplinary team consisting of all the key players, including ED leadership, general cardiologists, interventional cardiologists, pharmacists, and catheterization laboratory staff. “You can’t just delegate this to junior people to take care of,” says Guss. “They can play very important roles in monitoring and tweaking, but you need leadership so that it is very clear that this is an important endeavor for the institution, and then you’ve got to stick with it.”

The way the team addressed the issue was by breaking the entire process, from the time a patient arrives at the ED until the final act of opening an artery occurs, into all of its individual parts to see where delays were occurring and where there were opportunities for improvement, explains Guss. “Then, rather than pointing fingers or executing blame, we decided we would all work together to make the process as effective as it could be,” he says.

The health system’s electronic medical record (EMR) system facilitates this type of analysis because it time stamps every action, says Guss. “All of the clocks in the ED and all of the apparatus that we use are synchronized so that even if there is something that is not entered into the EMR, you can still look at the time stamp on an EKG and see exactly when it was performed,” he says. “You can look at the interpretation of the EKG and know exactly when it was performed, and you can look at the paging system and see exactly when a page went out.”

Look at the point of entry

By carrying out this type of analysis, team members quickly became aware of a major opportunity for improvement as soon as the patient walks in the door of the ED. Traditionally, patients entering an ED at UC San Diego would first encounter a registration person who had relatively little medical training, so this person’s ability to recognize someone who could potentially be having a heart attack was limited, says Guss. To solve this problem, the health system created a “greeter” position to be the first point of contact for all patients.

The “greeter” is an emergency medical technician who has received added training from the

health system’s educator on how to recognize potentially life-threatening conditions, such as heart attacks, explains Beverly Kress, RN, BSN, the director of nursing, emergency/critical care, at UC San Diego. “Sometimes there are subtle symptoms, especially in females, that would alert [a clinician] that a patient is having a heart attack,” says Kress, noting that upper-abdominal, gastric discomfort can be a tip-off for heart attack.

“The first person a patient will see behind a window is the greeter, and instead of [collecting demographic] and registration information, the greeter will find out why the patient is presenting to the ED, and chest pain is always going to warrant getting the patient straight to the back immediately,” she says. The patient can then receive an EKG at the same time he or she is providing registration information.

“We realized that often these patients were not getting EKGs for 10, 15, or 20 minutes after arrival, so we put an EKG machine in the triage area and made it the very first action that gets taken, even while the patient’s history and basic vital signs are being obtained,” says Guss.

“Then we made sure that the EKG is brought to the attention of someone who can accurately read it immediately, and right there, we were able to shave 10 to 15 minutes off of our average door-to-balloon times.”

Standardize procedures

The multidisciplinary team also created a “code STEMI” that ED staff will activate whenever they identify a STEMI patient. This action, which involves notifying the telecom operator, alerts several key people to take action: a rapid response nurse will come to the ED to provide an extra set of hands; a pharmacist will prepare the appropriate medications for a heart catheterization procedure; the cath lab team will prepare for a STEMI procedure; and a member of the security team will secure a trauma elevator that can go straight to the cath lab, so that there are no interruptions and no time lost, explains Kress.

By creating “STEMI packets,” ED personnel have been able to further trim steps out of the patient preparation process, notes Susan Watson, RN, BSN, a nurse manager in the ED who is also part of the multidisciplinary STEMI team. “In the cath lab, they use different tubing than we use in the ED [to facilitate the administration of several drugs at once], so instead of them having to

change the tubing once the patient is transported upstairs, we go ahead and initiate the cath lab's specific tubing, and we immediately put the patient on a transport monitor," says Watson. "The cath lab also uses disposable leads, which the ED does not use, so we go ahead and use the type of leads that the cath lab uses so that no time is wasted once the patient gets to the cath lab."

Implement a CQI process

The multidisciplinary STEMI team meets monthly to analyze every STEMI case and to evaluate why certain cases went well and why others went less optimally, says Guss. "We set standards for how long each step should take, and then we can go back and dissect why [a particular step] took two or three minutes longer than the standard," he says. "Sometimes, it is just an outlier or a breakdown in the system, and other times, it represents a problem with the system that we need to tweak."

Establishing targets is no problem because there are plenty of established benchmarks for STEMI patients, but you need to stay on top of it, says Guss. "It has got to be a CQI [continuous quality improvement] process," he adds.

One way the health system intends to further improve door-to-balloon times is by working on better field determination of STEMI patients because a significant number of these patients enter the ED via ambulance, explains Guss. "There is enough general education out there in the community so that when people have chest pain, they don't just jump in their cars and drive in, they dial 911 and get picked up," he says. "So we are working with the medics to make sure they get EKGs rapidly, and we are just now instituting a system where we can get access to those EKGs while the patient is still in the field, so that we can activate a STEMI response before the patient even gets to the hospital."

With this kind of CQI process in place, individual changes are not difficult to achieve, explains Guss. The new greeter position and the purchase of an additional EKG machine took some time because they required institutional expenditures, but he notes that most of the improvements were not complicated. "It was just a matter of creating a culture in which this was going to be a top priority for us," he says. "Failure was not going to be acceptable, and once that point was made clear, everything else fell into place. ■

'Huddles,' timeouts improve ED safety

Communication among caregivers is always important, but never more so than in the emergency department. A collaboration among hospitals across the country and a leading malpractice insurer has produced several simple but effective ways to improve communication.

The goal of the collaboration was to find ways to improve patient safety and outcomes in the ED, says **Dana Siegal**, RN, CPHRM, director of patient safety services with CRICO Strategies, the patient safety and medical malpractice company in Cambridge, MA, owned by and serving the Harvard medical community.

According to medical malpractice data from Crico's database, emergency medicine is among the top five areas with the highest malpractice claims, and diagnostic failure is the number one cause of medical liability in this area, she says. The effort revealed that communications problems and information gaps between physicians and nurses were a primary driver of diagnostic failure in the ED, Siegal says.

"One of the greatest vulnerabilities that has developed in the medical world is that the two most critical providers of care, the physician and the nurse, have — in part because of production pressure and hugely because of technology — begun to work in parallel tracks in caring for a single patient," Siegal says. "We discovered that in the course of care physicians and nurses can go entire shifts without speaking to each other."

This lack of communication is an unintended consequence of the growing use of electronic medical records and other technology, Siegal says.

Missed or delayed diagnoses in the ED are the leading cause of malpractice liability in emergency medicine, Siegal notes. In 2010, Crico and RMF Strategies, the consulting arm of Crico, convened the Emergency Medicine Leadership Council (EMLC) to address this challenge. Applying comparative malpractice data and their own experience and expertise, the EMLC participants, who were representatives from the Harvard-affiliated hospitals and RMF Strategies client organizations, worked to identify the underlying factors that contribute to missed or delayed diagnoses and patient adverse events in the ED.

Siegal notes that while diagnosis-related missteps are often attributed to cognitive error on the

part of the physician, the group identified communication problems and information gaps as present in many of the malpractice cases. The EMLC discovered that some element of missing information and/or gaps in communication among physicians and nurses were involved in nearly 80% of the cases studied. Specifically, physicians often were missing essential pieces of information at the time of decision making, which led to misdiagnosis.

“We’ve seen it clearly in the cases we studied,” Siegal says. “Nurses had information that clearly physicians did not seem to include in the equation. Or physicians were drawing assumptions that, had they seen all the information, they couldn’t possibly have drawn.”

A decline in the patient’s status also can be overlooked because of a reliance on technology, Siegal says. Vital signs often are recorded automatically by machines that document the signs to the medical record, she notes, but is anyone actually looking at the trend? If the signs are automatically recorded, does the doctor ever have a chance to ask the nurse what might have caused the change in vital signs?

“No one is saying that this technology is bad or doesn’t offer tremendous benefits, but we are realizing that it can discourage some of the face-to-face conversations that are so crucial to good patient care,” she says. “Our participants developed strategies to get people talking again, to have people stop, look each other in the eye for minute and say, ‘Did you see that her blood pressure is up? Should we be concerned that his saturation level is down?’” ■

Palm scan technology improves patient safety

A New York City hospital is taking patient identification into the 21st century by using palm scans to avoid identity confusion and improve patient safety.

New York University Langone Medical Center (NYU Langone) recently began using PatientSecure, a biometric technology from HT Systems in Tampa, FL, to identify patients, says **Bernard A. Birnbaum**, MD, senior vice president, vice dean and chief of hospital operations at NYU Langone.

“Patient safety is the primary reason we investigated this technology,” Birnbaum says. “I’m a

radiologist by training, and we radiologists were always frustrated by and scared of duplicate medical record numbers. The primary reason we implemented this system was to combat duplicate medical records.”

Those duplicate records are generated when people use slight variations of their name during the admissions process, such as Michael Smith, Mike Smith, and Michael B. Smith. Employees and the software system should be able to stop the duplication, but nevertheless some will slip through, Birnbaum says. “It’s a dirty little secret in most health systems,” Birnbaum says. “Nobody wants to talk about it.”

Print tied to medical record

Using a palm scanner enables the hospital to instantly tie that palm print to the correct medical record, Birnbaum says. Utilizing near infrared light to map an image of the blood-flow pattern through the veins in a person’s palm, the digital palm image is converted into a unique patient identifier that interfaces with the medical center’s electronic health record system. “Vein patterns are 100 times more unique than fingerprints,” Birnbaum says. “As a result, PatientSecure provides a safe, secure, easy and fast way for our patients to register for care at the medical center. It not only protects privacy and enhances quality, but transforms the patient experience.”

The advanced technology of PatientSecure helps to ensure each patient is correctly linked to the right medical record, a task which is not always as straightforward as it sounds, Birnbaum says. For example, at the medical center alone, two or more patients with healthcare records share the same first and last names more than 125,000 times, he notes. As a result, with PatientSecure, a patient

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simply places his or her hand on a small black box and their unique identifying palm portrait automatically registers them and accesses his or her electronic health record, reducing the chances of misidentification and minimizing the need to present other identifying information after initial enrollment, such as a driver's license or Social Security number.

Streamlining registration

Streamlining the traditionally cumbersome registration process also helps enhance the overall patient experience from the moment the patient walks in the door and provides added protection from medical identity theft because patients no longer need to share personal identifying information, Birnbaum says.

NYU Langone piloted the palm scanning technology in May 2011 at their Internal Medicine Associates faculty group practice. Following the hospital implementation in June, more than 5,000 patients embraced PatientSecure in just one week, and the numbers continue to rise, Birnbaum says.

Birnbaum notes that if a patient without identification arrives at the medical center unconscious or unable to communicate, PatientSecure can be a lifesaving tool that quickly identifies the individual, opens his or her electronic health record, and alerts medical professionals to crucial information, including medical history, allergies, and current medications.

Registration using PatientSecure is available for inpatient registration at the medical center's three hospitals: Tisch Hospital, the Hospital for Joint Diseases, and the Rusk Institute of Rehabilitation Medicine. It is also available for outpatient services at the medical center, including radiology and lab tests, as well as at a growing number of physician offices affiliated with NYU Langone. There is no cost to patients to participate in PatientSecure.

NYU Langone has 250 of the palm scanners in place. Birnbaum estimates that the first-year cost was about \$200,000, which included acquiring the hardware.

"Patients love it. They describe it as a VIP process and they're all in favor of it reducing errors and identity theft," Birnbaum says. "It really expedites the registration process because they scan their palm and their records come right up." ■

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