Abstract: Through its performance improvement service lines, Hackensack University Medical Center first reduced, and then eliminated, the occurrence of cardiac-related, inadequate “hand-off,” defined as delays in getting the right treatment to the patient at the right time. [Nurs Manage 2005:36(8):23-27]

The performance improvement plan at Hackensack University Medical Center (HUMC), Hackensack, N.J., supports a system closely aligned with the recommendations of the 2001 Institute of Medicine report *Crossing the Quality Chasm: a New Health System for the 21st Century*. The medical center is one of only seven U.S. healthcare organizations selected to take part in *Pursuing Perfection: Raising the Bar for Health Care Performance*—a groundbreaking initiative funded by the Robert Wood Johnson Foundation and led by the Institute for Healthcare Improvement (IHI). As a result, the medical center received a $1.9 million grant to develop improved care models for disease prevention and treatment.

**Best-practice protocols:**

Evidence-based care for acute myocardial infarction

*The Institute for Healthcare Improvement’s 100,000 Lives Campaign endorses improved acute myocardial infarction management. Here, learn how one facility eliminated delays to intervention and stabilization.*

By Mary Ann T. Donohue, RN, APN,C, PhD
HUMC—a 683-bed, not-for-profit, tertiary care, teaching and research hospital serving northern New Jersey and New York—is New Jersey’s largest provider of inpatient and outpatient services, with more than 70,000 inpatient admissions and 59,000 emergency/trauma department visits per year. Approximately 600 patients annually present to the emergency/trauma department with a myocardial infarction (MI).

HUMC’s aim is to improve a wide range of care processes, the centerpiece of which is making care of all patients more reliable. Performance improvement service lines, in place within all areas of the medical center, incorporate reports that now allow providers to focus on areas of concern which require further review. Given standard quality improvement tools at hand, clinicians can drill further down into the data and determine disease-specific, unit-specific, and provider-specific information, which, in turn, can be used to either identify best practices or develop plans for further improvement.

HUMC staff members initiate failure mode and effects analysis to identify, detect, and develop small tests of change. Using rapid-cycle testing methods, staff can ensure reliability, and ultimately, indicator compliance. Early recognition of symptoms along with timely treatment and appropriate communication among caregivers regarding patient status are all factors in preventing safety failures. Every failure is brought back to the appropriate caregiver or unit. Trended issues are then analyzed for global process changes or enhancements that ultimately lead to improved outcomes.

Eliminating inadequate “hand-off”
Through its participation in national IHI collaboratives, HUMC has been exposed to an entirely new process of working with other like-minded facilities to develop best-practice models. HUMC considers itself a learning organization, spreading interventions that have fostered safe and reliable care to patients and continually participating in multisite collaboratives. For example, administrators assembled a team of representatives of every hospital department to contribute to the care of patients experiencing acute MI—one of the six interventions recommended by the IHI’s 100,000 Lives Campaign.

HUMC’s first goal was to reduce and eventually eliminate inadequate “hand-off,” defined as delays in getting the right treatment to the patient at the right time. Clinicians studied the time to treatment for several components of acute MI management—immediate administration of ASA and a beta-blocker, an electrocardiogram within 10 minutes of
arrival, and if appropriate, a cardiac catheterization procedure within 90 minutes (door to puncture time) of arrival, followed by balloon dilation of the artery 30 minutes later for a total of 120 minutes from the time of admission (door to inflation time).

After repeat rapid-cycle tests and implementation of best practices, the team concluded that the 90-minute time frame of cardiac catheterization after arrival had been perfected. To further improve treatment, the team then sought an even tighter time frame of 75 minutes from door to puncture. Hospital personnel haven’t yet experienced 100% compliance with the new time frame, but in March 2005, 8 of 10 patients received “time to puncture” treatment in less than 75 minutes. All 10 patients had a 100% achievement of time to puncture of less than 90 minutes.

**Rapid-cycle testing**

How did HUMC’s “overnight” success happen? Certainly, not overnight. The concept of rapid-cycle testing worked for the facility, as it did for others. When individuals take ownership for their particular role in the process, process failures are less likely. As one team member put it, “Everyone leaves their stripes at the door.” A true collegial atmosphere is present at the meetings. Excellent patient care is the focus, not just excellent numbers. Everyone is encouraged to critique any link in the chain. For example, someone on the expert clinical team is assigned the function of following up with the patient’s own attending physician. Should that attending physician’s care not meet the standards, that team member must communicate and negotiate so that the practice pattern changes.

Another successful improvement for HUMC’s acute MI patients, should their condition deteriorate after angioplasty and stent, is intervention by a rapid response team.
(RRT), which supports early recognition of a change in the patient’s status. HUMC’s RRT is comprised of a provider (hospitalist MD, APN, or PA), a critical care RN, and a respiratory therapist. Rapid response teams are another recommended intervention in IHI’s 100,000 Lives Campaign. The team rapidly brings critical care expertise to the bedside and provides early interventions to reverse deterioration in condition and promote better outcomes. Along with this clinical expertise, it provides advanced assessment skills and support for the staff nurse, patient, and the family. The resulting effect is critical moment-by-moment support to the nursing staff through appropriate care at the appropriate level, and help in organizing patient findings for succinct and efficient communication with the attending physician and immediate support to the staff nurse.

Additional success markers
Other significant elements of HUMC’s success include:
♦ revision of the performance improvement infrastructure—reporting up from individual units, to service lines, and then to hospital-wide committees and councils
♦ redesign of the multidisciplinary rounding process to incorporate critical elements into the team discussion aimed at evidence-based standards of practice
♦ widespread use of whiteboard communication tools
♦ change in how consulting interventional cardiologists are accessed: Every primary care physician and noninterventional cardiologist must give the staff two names of prospective interventional cardiologists to call for their own patients, thus shortening the time to care considerably. Also, this step decreases the time it takes to call each attending physician, as well as the time waiting for a callback and subsequent call to a consultant of their choice.
♦ development of a plan to address early ambulation, prophylaxis, and early identification of at-risk patients for tobacco cessation counseling by the APN or unit nurse
♦ widespread use of the e-column Clinical Clips by every professional care provider, with pithy, toolbox versions of the latest best practices or bundles. These serve as reminders along every step of the patient’s care.
♦ authorization of hospitalists to fill in for lapses in care, as when the attending physician can’t or doesn’t provide the care according to the agreed-upon “perfect care” models.

HUMC’s current commitment to the IHI’s 100,000 Lives Campaign further broadens the center’s application and potential success to other processes within its hospital’s setting.

ABOUT THE AUTHOR
Dr. Mary Ann T. Donohue is administrative director of nursing at Hackensack University Medical Center, Hackensack, N.J.

About the IHI
Founded in 1991 and based in Cambridge, Mass., the Institute for Healthcare Improvement (IHI) is a not-for-profit organization, cultivating innovative concepts for improving patient care and implementing programs for putting these ideas into action. The 100,000 Lives Campaign is a nationwide initiative of the IHI to radically reduce morbidity and mortality in American healthcare. Building on the successful work of healthcare providers all over the world, the Institute introduced proven best practices across the country to extend or save as many as 100,000 lives. The IHI and its partners in this work believe it’s possible to achieve this goal by June 2006. To learn more about this effort, contact the IHI at 1-866-787-0831 or http://www.ihi.org.

About this series
This series examines the IHI’s suggested 100,000 Lives Campaign interventions from a managerial perspective. It continues next month with a discussion of adverse drug event prevention. The journal will explore the remaining interventions in subsequent months.