The hospital now moves 90% of ST-segment elevation MI patients needing PCI to treatment in less than 90 minutes, an increase of 47% since the new procedures were put in place, Dr. Luis Haro explained.

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Quality Initiatives Shorten Mayo's Door-to-Balloon Time

BY THERESE DROSTE
Contributing Writer

WASHINGTON — Implementing a quality improvement initiative for ST-segment elevation MI shortened the time to treatment with primary percutaneous intervention from 104 minutes to 75 minutes in less than 7 months, reported Luis Haro, M.D.

In addition, the percentage of patients with a time to PCI (called door-to-balloon time [DTBT]) of less than 90 minutes increased from 42% to 82% during the study period of May 17–December 31, 2004. Since then, that percentage has gone up to 90%, and DTBT has decreased to 72 minutes, Dr. Haro, of the department of emergency medicine at the Mayo Clinic, Rochester, Minn., told CARDIOLOGY NEWS.

Dr. Haro and colleagues implemented a quality initiative after a chart review of data from July 2002 to September 2003 showed that the hospital's DTBT was 200 minutes, he said at a meeting sponsored by the American Heart Association.

The initiative involved new processes to streamline communication between providers in the emergency department (ED), the catheterization lab, and the quality department.

"It was very hard to figure out where to find the data, since there are five or six areas to look for information, such as the ED chart and the cath lab report," said Dr. Haro, quality chair of emergency medicine. A group from quality, communications, cardiology, nursing, and the ED met biweekly for 3 months before implementing the changes. The project's goals were to achieve a door-to-ECG time of 5 minutes, a door-to-activation time of 15 minutes, a door-to-departure-to-cath-lab time of 45 minutes, and a door-to-PCI time of 90 minutes. After closer scrutiny of the original data, the investigators adjusted the initial DTBT to 104 minutes.

The first change was to replace several ED clocks to server-based ones that display official U.S. time, since some of the original discrepancies in the data had to do with how times were recorded in the charts. "Now that every minute counts, it must be accurate," said Dr. Haro.

Time stamps on a patient's small triage sheet track the initial door time, rather than the registration time, which was used as a point of reference in the past.

"When a patient has chest pain, we place them in a bed immediately and start the evaluation and initial management. Before, we had artificial times, since charts were sometimes generated after a patient had aspirin, oxygen, or an electrocardiogram, meaning 10-15 minutes were spent before their door time was recorded," said Dr. Haro. Door-to-ECG times dropped from 14.4 minutes to 9.1 minutes.

Several other changes were made. Registration personnel use wireless laptops at patients' bedsides to help capture real-time data, which is immediately displayed on a monitor in the ED. This allows providers to assess whether their performance goals are being accomplished for that given patient.

The ED physician now activates the cardiac catheterization team without a cardiac consultation. Previously, time was wasted through numerous phone calls made among the ED, the CCU and cath team to try and organize a PCI. Now, the entire team is activated by a single group page within 15 minutes of the patient's arrival. The pagers display text to state the problem, the patient's location, and when the patient will be on the table. "It runs similar to a trauma system," said Dr. Haro. Cath team members make one call in to a communications center to acknowledge the page, whereas CCU personnel just show up to join the team.

To improve door-to-departure times, 2-hour priority parking was given to cath lab members, who previously parked at a distance from the hospital; a dedicated phone line was established between the ED and the cath lab; and elevator keys were given to cath team members to bypass stopping at floors, which used to slow them down.

The American College of Cardiology recommends a 60-120 minute DTBT, while the Joint Commission on the Accreditation of Healthcare Organizations recently changed recommended times from 90 to 120 minutes. ■

Better GI Bleeding Prophylaxis Needed After Stenting

CHICAGO — Cardiologists might not be adequately protecting their coronary artery–stenting patients against the risk of upper GI bleeding due to antiplatelet therapy, according to a poster presented at the annual Digestive Disease Week.

The study, led by Steven Chang, M.D., was a chart review of 636 randomly selected patients who received stents at three institutions, including Chicago's Northwestern Memorial Hospital. Most patients received aspirin before (72%) and/or after (97%) stent placement, which increased their risk of peptic ulcer–related bleeding, according to Dr. Chang and his colleagues.

After stenting, however, only 24% were prescribed a proton pump inhibitor (PPI), reported Dr. Chang, who is a consultant to Santarus, a manufacturer of omeprazole.

Three of the stent recipients had a documented history of upper-GI bleeding, 23 had a history of peptic ulcer disease, and 30 were receiving NSAID therapy that was not stopped before stenting. "Few coronary stent patients who are started on aspirin and other antiplatelet agents receive appropriate GI prophylaxis," Dr. Chang wrote.

But it might not be cost effective to prescribe a PPI to all patients before stent placement, he added. "We recommend that cardiologists give PPIs to patients at risk [of upper GI bleeding] before stenting."

—Kathleen Louden