

U.S. Lags Behind Europe in Transfer Time to PCI

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NEW ORLEANS — Just 4% of U.S. acute MI patients transferred from one hospital to another for primary percutaneous intervention are treated within 90 minutes as recommended in recent guidelines, Brahmajee K. Nallamothu, M.D., reported at the annual scientific sessions of the American Heart Association.

This finding from the large National Registry of Myocardial Infarction (NRMI)



More than 50% of transferred patients had transfer times in excess of 120 minutes.

DR. NALLAMOTHU

database indicates an urgent need for improved process-of-care systems in order to minimize time delays for transferred MI patients, said Dr. Nallamothu of the University of Michigan, Ann Arbor.

PCI, when performed expeditiously, yields outcomes clearly superior to thrombolytic therapy. But at present, only about 20% of U.S. acute care hospitals have the capacity to perform primary PCI.

When a patient presents to a hospital

2004 IN REVIEW

Interventional cardiology gained ground this year as an alternative to coronary artery bypass graft surgery, as drug-eluting stents were shown to reduce restenosis rates. This and other advances in devices, such as carotid stents with distal protection, could have a far-reaching impact on the health care system (including costs) as more patients undergo percutaneous interventions. For example, drug-eluting stents have “thrown a monkey wrench in the hospitals economic projections about their angioplasty business because there is a higher cost up front to acquire these stents, and with reduced amounts of restenosis, they have less repeat business,” John M. Flack, M.D., of Wayne State University, Detroit, told *CARDIOLOGY NEWS*.

With new devices and technologies, boundaries between interventional cardiologists, interventional radiologists, vascular surgeons, and neurologists are disappearing, leading specialty societies to establish competency requirements to protect patients as well as turf. Even the Food and Drug Administration is getting into the act, with training criteria physicians must meet before they can implant Guidant's Acculink carotid stent.

—From staff reports

without such capacity, the only options are on-site thrombolysis or immediate transfer to another facility for the procedure.

The pro-transfer argument is bolstered by several favorable European randomized controlled trials. However, these trials were conducted in countries with better-organized care and shorter transfer distances than are the norm in the United States. As a result, total door-to-balloon times in the randomized trials was only about 90 minutes. And the great majority

of transferred American patients don't even come close to that speed of care.

Dr. Nallamothu's analysis of the NRMI-3 and -4 cohorts underscores that point. Of 4,278 consecutive acute MI patients transferred for primary PCI at 419 hospitals participating in the registry, only 4.2% had a door-to-balloon time of 90 minutes or less, as recommended in the recently issued AHA/American College of Cardiology guidelines (*J. Am. Coll. Cardiol.* 2004;44:671-719). The median door-to-bal-

loon time was 180 minutes. Only 16.2% of transferred patients had a door-to-balloon time of 120 minutes or less, as recommended in earlier AHA/ACC guidelines. The great bulk of the time delay occurred because of prolonged transit times. More than 50% of transferred patients had transfer times in excess of 120 minutes.

NRMI is an ongoing project funded by Genentech. Dr. Nallamothu's study was supported by the National Heart, Lung, and Blood Institute. ■



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¹ McKee PA et al. The natural history of congestive heart failure: the Framingham study. *N Engl J Med* 1971; 285:1441-6.

² Remes JM, Reunamen APK. Validity of clinical diagnosis of heart failure in primary health care. *Eur Heart J* 1991; 12:315-321.

³ Struthers AD. The diagnosis of heart failure. *Heart* 2000; 84:334-338.

⁴ James SK, et al. N-Terminal Pro-Brain Natriuretic Peptide and Other Risk Markers for the Separate Prediction of Mortality and Subsequent Myocardial Infarction in Patients with Unstable Coronary Artery Disease: A Global Utilization of Strategies to Open Occluded Arteries (GUSTO) IV Substudy. *Circulation* 2003; 108(3):275.

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