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CORRESPONDENCE

Letters to the Editor

The Weasel Clause Excluding Patients From Door-to-Balloon Analyses

Numerous broad-based studies, including that from the U.S. National Registry of Myocardial Infarction (1), have convincingly shown a direct relationship between door-to-balloon time and in-hospital mortality for patients treated with primary percutaneous coronary intervention for ST-segment elevation myocardial infarction. Presumably, the principal reason for this observation is that ischemic time, and hence infarct size, is limited by early reperfusion (2). Some data suggest, however, that the reduction in mortality is due to greater overall quality of care rather than reperfusion time per se (3).

Fast door-to-balloon times require a multidisciplinary system approach. This has been carefully studied and noted to include, when possible, paramedic electrocardiogram transfer to alert the receiving team, single-page activation of the on-call team, and a quality control program with system feedback, all of which, to a large degree, are under control of the emergency medical servicesemergency room-interventional cardiology "system." There are a number of factors that might adversely affect door-to-balloon time that are beyond the control of the team, including difficult consent process, need to exclude serious comorbidities that might influence concomitant drug therapy for primary percutaneous coronary intervention (e.g., intracranial hemorrhage for a patient found down and resuscitated), and cardiac arrest occurring between the time of emergency department arrival and initiation of percutaneous intervention. Some other potential causes for delay are well within the control of the interventionalist team, including weekend/off-hours staffing, skillful vascular access, and rapid cannulation of the infarct-related artery.

Door-to-balloon-time metrics can be appropriately used both for internal quality control and for external comparison. For internal quality control, the hospital might choose to exclude patients with certain comorbidities, and as long as they are consistent in doing so, they can track improvements in outcome and even compare among operators. For external comparison, however, particularly in the "pay for performance" era, the exclusion rules must be applied uniformly. Ideally, reasons for exclusion should not be subjective or easily "gamed." Few, it would seem, would argue with these ground rules.

Therefore, when the most recent ACC NCDR-revised reasons for patient exclusion in door-to-balloon time analysis were announced (4)—most notably difficult vascular access or difficulty in crossing the culprit lesion, both highly subjective and easily used to explain a poor door-to-balloon time—it struck us as inappropriate. In fact, when we heard these exclusions described, our initial commentary was "this would allow for an abrogation of responsibility" or, more colorfully, "this is a weasel clause!" Physicians are under fire from multiple quarters due to perceived lack of integrity arising from the activities of some of our colleagues. We call for a retraction of such subjective and easily manipulated exclusions immediately. Should that not be possible, or meet with illogical resistance, at a minimum, each site should be required to report the percentage of patients with ST-segment elevation myocardial infarction that were excluded from "reportable" door-to-balloon time.

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REFERENCES

- McNamara RL, Wang Y, Herrin J, et al., on behalf of NRMI Investigators. Effect of door-to-balloon time on mortality in patients with ST-segment elevation myocardial infarction. J Am Coll Cardiol 2006;47:2180-6.
- DeLuca G, Suryapranata H, Ottervanger JP, Antman EM. Time delay to treatment and mortality in primary angioplasty for acute myocardial infarction. Circulation 2004;109:1223–5.
- Flynn A, Moscucci M, Share D, et al. Reducing door to balloon time in patients with ST-elevation myocardial infarction undergoing percutaneous coronary intervention: does a decrease in door to balloon time translate into a reduction in mortality? Circulation 2009;120:S472.
- American College of Cardiology National Cardiovascular Data Registry. Available at: http://www.ncdr.com/webncdr/common/. Accessed September 30, 2010.

Reply

As contributors to the NCDR (National Cardiovascular Data Registry), we read the letter by Ellis and colleagues with interest. The NCDR has long been dedicated to the measurement and improvement in care quality. Undoubtedly, these goals are best promoted when the measures used to characterize quality are as valid as possible.

We agree regarding the distinction between measures used for the purposes of quality improvement and those intended for the purposes of external accountability. Indeed, the American College of Cardiology/American Heart Association (ACC/AHA) Performance Measures Task Force methodology explicitly acknowledges this dichotomy (1). Measures used for the purposes of accountability must rise to a particularly high standard with respect to validity, burden of data collection, and susceptibility to "gaming."

The specific issue Ellis and colleagues raise is the exclusion in the reperfusion measure for patient-centered reasons for delaying therapy in the NCDR CathPCI Registry. Clinically appropriate reasons for delays in reperfusion therapy are numerous. Indeed, enumerating