

Less than half of deaths after angioplasty result of procedure, study shows

May 7 2013

Only 42 percent of the deaths occurring within 30 days of percutaneous coronary interventions (PCI) were attributable to complications from the procedure, according to a Cleveland Clinic study published online in the *Journal of the American College of Cardiology*. The research suggests alternative outcome reporting mechanisms for 30-day mortality for PCI should be considered before mandatory reporting regulations are put into place.

PCI is a non-surgical procedure in which [balloons](#) and/or stents are used to open blocked or narrowed [arteries](#), which are typically accessed via a [catheter](#) placed in an artery in the groin area.

According to the researchers, public reporting of outcomes after PCI, and in particular 30-day mortality, is likely to be mandated by the federal government in the future and is already required in several states. The outcomes reporting would help patients make better informed decisions about their [medical care](#) and could form the basis for determining reimbursement amounts from [Medicare](#) and [Medicaid](#). Additionally, the data would likely impact physician and hospital reputation, according to the study.

The researchers, led by Mehdi H. Shishehbor, D.O., M.P.H., Ph.D., Director of Endovascular Services in the Sydell and Arnold Miller Family Heart & Vascular Institute at Cleveland Clinic, caution, however, that mandatory reporting also leads to risk avoidance, or physicians turning down the most risky patients – often those who would most

benefit from a procedure – out of fear that the patient may die. Prior research has already shown that risk avoidance can occur when outcomes reporting is made mandatory.

The mortality rate for PCI is typically ascertained from death certificates and all cardiac deaths are reported in the 30-day mortality rate. In their study, Dr. Shishehbor and his colleagues examined the records of the 4,078 PCI procedures performed at a single tertiary care center between January 2009 and April 2011. There were 81 deaths occurring within 30 days of the procedure, and of these, 58 percent were cardiac deaths. However, when the researchers conducted a detailed chart review using established and accepted guidelines, they found that only 42 percent of the 30-day deaths were attributable to PCI-related complications, and they measured this in the most conservative manner, according to Dr. Shishehbor. Further, they found that death certificates were only 58 percent accurate for classifying cardiac versus non-cardiac death.

"Outcomes reporting is a vital component of our shift toward accountable care and will be extremely valuable to patients and physicians," said Dr. Shishehbor. "But we must ensure that we are reporting the right outcomes. If we attribute mortality incorrectly to PCI complications, this may lead to risk avoidance, meaning the sickest patients who would benefit the most from interventions – those presenting with heart attack and cardiac arrest – may not get the care they need."

The researchers suggest that outcomes reporting for PCI should be classified into PCI- and non-PCI-related deaths to best reflect quality and operator performance while holding hospitals and physicians accountable for the care they provide.

"These results highlight the limitations of 30-day [mortality](#) reporting when death certificates are used and emphasize the need for identifying

PCI-related deaths rather than cardiac deaths alone," the researchers write. They say it is "important to classify causes of death into categories which truly reflect a physician and an institution's competence and act as an indicator of performance."

Provided by Cleveland Clinic

Citation: Less than half of deaths after angioplasty result of procedure, study shows (2013, May 7) retrieved 23 April 2024 from

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