

ACUTE CORONARY SYNDROMES

Should AMI care be regionalized?

Patients with acute myocardial infarction (AMI) who are admitted to hospitals that have the capacity to perform percutaneous coronary intervention (PCI) have better average survival rates than patients admitted to hospitals where PCI is not performed. However, the finding that large differences exist across hospitals and health-care regions has been reported by Jersey Chen and colleagues in the *Archives of Internal Medicine*.

Whether the systematic referral of patients with AMI to hospitals where PCI is performed would have benefits is not clear and such a regionalization has been under debate in the USA. Several studies have assessed average differences in patient outcomes according to the presence or absence of PCI facilities in hospitals, but Chen and colleagues have

also investigated how outcomes vary at the hospital and regional levels.

The researchers analyzed data from 718,028 Medicare beneficiaries who had been hospitalized for AMI at 3,873 US hospitals between 2004 and 2006. They classified hospitals as 'PCI' if they had the capacity to perform emergency revascularization during ST-segment elevation myocardial infarction. First, "we calculated [30-day] risk-standardized mortality rates for AMI for each hospital," Chen explains. Then, they assessed differences between hospitals and between health-care regions (defined on the basis of patterns of referral for major cardiovascular and neurological procedures). For each region, the investigators compared mortality at the best-performing PCI hospital with the average mortality for all the non-PCI hospitals in the region.

The average 30-day mortality, adjusted for patient age and sex, and comorbidities, was significantly lower among patients admitted to PCI hospitals than among those admitted to non-PCI hospitals (mean 16.1% and 16.9%, respectively). Nevertheless, a wide variation within each of the two hospital types and across individual health-care regions was found. "While there were many regions where the difference in mortality between the best PCI hospital and the average of non-PCI hospitals exceeded 3%, there were also

many regions where the difference was small, and some where the best PCI hospitals had higher mortality rates than the average of non-PCI hospitals," Chen points out.

“...large differences exist across hospitals and health-care regions...”

These findings suggest that factors other than the availability of PCI are likely to contribute to hospital performance in the treatment of patients with AMI. "Our colleague Betsy Bradley is ... examining ... what processes of care and hospital organizational strategies are employed at the best-performing hospitals that can be translated across all hospitals," says Chen. Furthermore, as regionalization may lead to a decrease in mortality in some regions, but not in all, "a careful assessment of hospital outcomes within a particular region is needed before [a regionalization program] is implemented," concludes Chen.

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