

'Report cards' don't reflect preventable bypass deaths

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While death rate "report cards" indicated low mortality rates after heart bypass surgery, a review of in-hospital deaths in heart bypass patients at Ontario, Canada hospitals found that one-third might have been prevented, researchers report in *Circulation: Journal of the American Heart Association*.

In the largest review of coronary artery bypass graft (CABG) deaths to-date, researchers conducted a retrospective analysis of 347 in-hospital deaths, randomly selected, from nine Ontario hospitals between 1998 and 2003. They analyzed all-cause, risk-adjusted in-hospital deaths after CABG surgery to determine the proportion of potentially preventable in-hospital deaths as a measure for hospital quality of care.

Despite a low risk-adjusted, average mortality range of 1.3 percent to 3.1 percent across Ontario hospitals, which is comparable to contemporary data in the United States, researchers concluded that 111 of the 347 deaths (32 percent) after CABG might have been prevented.

"These findings underscore the need to find better ways to evaluate hospital performance than our current report card models," said Veena Guru, M.D., lead author of the study and a research fellow at Ontario's Institute for Clinical Evaluative Sciences (ICES) and Sunnybrook Health Sciences Center of the University of Toronto. "It's appealing to see public report cards in healthcare as a cure-all. This study shows that we can't just publish post-operative death rates if we want to continue to improve the quality of care."

Researchers conducted the study in a region where, since 1999, hospital bypass mortality rates are publicly reported and mortality rates have steadily improved to less than 2 percent.

The study's findings have implications for quality of care initiatives that rely only on hospital report cards to monitor and improve quality of care.

In the study, experienced cardiac surgeons, a majority of whom were cardiac surgical division heads, reviewed chart summaries for all CABG deaths over the five years and identified preventable deaths using a standardized tool. Two reviewers looked at each death, and a third reviewer was used when the surgeons disagreed. Researchers estimated preventable deaths for each hospital and compared them to all-cause mortality rates. Both reviewers judged 52 total deaths to have been preventable. One of the two reviewers considered another 114 deaths preventable — of which the third reviewer determined 59 were preventable.

Most of the preventable deaths were related to problems that occurred either during surgery or while patients were recovering in intensive care, and many were attributable to lapses in established hospital procedures. Independent of whether the death may have been preventable, both surgeon reviewers identified deviations in perioperative care in 32 percent of assessments and one reviewer did so in 42 percent of the assessments.

The analysis also identified quality improvement opportunities for preventable deaths in communication, credentialing, education, quality assurance programs, enhanced resources and retraining.

"Because deaths judged as preventable were more common in patients with lower predicted operative risk, one way to initially focus quality improvement efforts is to look most closely at deaths that are statistically

'unexpected' — i.e., occurring among those who were expected to have uncomplicated post-operative courses and excellent outcomes," said Chris Feindel, M.D., M.Sc., a senior cardiac surgeon from the University Health Network in Toronto who participated in the study.

"Mortality rates for coronary bypass surgery have declined in the province of Ontario to less than 1.5 percent according to the most recent performance report card," said Stephen Fremes, M.D., M.Sc., senior author of the study and divisional head at Sunnybrook Health Sciences Centre. "The reason for this further decline is uncertain, but the study may have stimulated subsequent quality improvement exercises in the cardiac surgical units in Ontario.

"We identified specific opportunities to improve the care of coronary bypass patients from this investigation," Fremes said. Typical report cards do not provide the necessary detail to direct surgeons where to focus their quality improvement efforts. We hope these findings will stimulate cardiac surgery, and other quality of care initiatives to invest in more detailed audits of adverse events rather than rely solely upon risk-adjusted outcomes report cards to improve outcomes."

In an accompanying editorial, Harlan Krumholz, M.D., professor of Medicine and Epidemiology and Public Health at Yale University School of Medicine, Center for Outcomes Research and Evaluation, in New Haven, Connecticut notes that the study indicates a large percentage of CABG deaths appear preventable with optimal care and the rate is probably similar in the United States.

Noting that the study offers important lessons with implications beyond cardiac surgery, he said that medicine needs to develop a culture in which this type of examination is part of the expectation of every hospital, clinician and patient, "How else will we attain the goal of creating the high-reliability high-performance institutions that we prefer

for our practices and that our patients deserve?"

Source: American Heart Association

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