Mortality rate drops among coronary bypass, heart valve surgery patients

By Michael Iorfino (Staff Writer)
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Over the past seven years, mortality rates for patients who had coronary artery bypass and/or heart valve surgery have fallen by more than 20 percent in Pennsylvania.

Despite an increase in complicated cases, the number of coronary artery bypass graft surgery patients who died in hospitals dropped 21 percent, from 1.9 percent in 2005 to 1.5 percent in 2012, according to data collected by the Pennsylvania Health Care Cost Containment Council.

Meanwhile, in-hospital mortality rates for patients who underwent valve surgery fell by as much as 38 percent during the same time period, and a lower percentage of patients needed to be readmitted within 30 days for a heart-related infection or complication, according to the council's findings.

The report details outcomes for 20,164 patients who underwent coronary artery bypass graft and or heart valve surgery between July 1, 2011 and Dec. 31, 2012 at the 59 Pennsylvania general acute care hospitals performing the procedures.

"Even though the risk profile of the patients we are asked to treat has gotten worse - you know, older, sicker patients - our techniques have gotten better," said Russell Stahl, M.D., chief of cardiothoracic surgery and co-director of the cardiovascular service line at Geisinger Community Medical Center.

"And the surgeons in Pennsylvania, by in large, are very good surgeons."

While their rates vary, the five Northeast Pennsylvania hospitals included in the report - GCME, Regional Hospital of Scranton, Wilkes-Barre General Hospital, Geisinger Wyoming Valley Medical Center and Pocono Medical Center - saw similar levels of success. Moses Taylor Hospital doesn't perform cardiac surgery.

Only Regional Hospital of Scranton failed to meet the expected mortality rate for any of the four procedures: coronary artery bypass graft surgery, valve surgery with CABG surgery, valve surgery without CABG and total valve surgery.

Coronary artery bypass graft surgery is a procedure in which a surgeon creates an alternate path for blood to reach the heart because a section of the artery is blocked. In valve surgery, one or more of the heart's valves are repaired or replaced with an artificial one or one harvested from animal or human tissue.

Of the 112 documented cases involving a patient undergoing valve surgery but not bypass surgery at Regional Hospital, there were seven fatalities - equating to a 6.3 mortality rate, which falls outside the expected range of zero to 5.4, the report found. The ratings account for patient risk, such as how sick the patient was when admitted.

Regional Hospital of Scranton officials were unavailable for a phone interview. In an emailed statement, Regional's Medical Staff President Dr. David Fitzpatrick said many cardiac patients are admitted with multiple health issues, including diabetes or obesity.

"Combined with the high volume of cardiac surgical procedures we perform, these high-risk patients can statistically impact our mortality rates, despite the report's risk-adjustment calculation," he said in the statement.

Dr. Stahl credits the decrease in mortality rates at GCME to several strategies, including blood conservation and an increased awareness to acute kidney injuries - a common injury following open-heart surgery.

“Our rate of that happening is exceedingly low ... and as a result, our patients get better, they leave the hospital sooner and they don't get readmitted,” he said.

As mortality rates drop, the number of coronary artery bypass graft surgeries completed has plummeted as well.

From 2005 to 2012, the number of coronary bypass surgeries without valve procedures decreased by 4,348, from 12,628 to 8,280, the report found.

Martin Ciccocioppo, vice president of research at the Hospital and Healthsystem Association of Pennsylvania, said new techniques and surgeries give health care providers more ways to treat heart conditions.

"It's been replaced by other modalities," he said.

Now, surgeons can use catheters to snake their way toward their heart, instead of cutting the blood vessel, he said.

Contact the writer: miorfino@timesshamrock.com, @miorfinoTT on Twitter