Enhanced Recovery After Cardiac Surgery (ERACS) Pilot Program Saves Hospital Days, Readmissions and Costs

Objective:
The purpose of the ERACS pilot program was to improve perioperative care through implantation of same day admission, ambulation and discharge as potential tools to decrease hospital stay and costs. An early systematic telephone follow-up was used to measure patient satisfaction and quality of care.

Methods:
Two registered nurses dedicated to the perioperative optimization pathway were hired to develop, implant and monitor the program. Coronary Artery Bypass Grafting (CABG), valve replacements and valve repairs patients were considered for the standard ERACS pathway preoperatively. At every step, patients could bifurcate to the critical pathway if complications contraindicated standard management. Same-day admission and ambulation to the operating room for in-patients was increased. After being extubated in the Intensive care unit (ICU), the patients were mobilized to a chair within 6 hours of surgery and to a first monitored ambulation within 24 hours. These patients were transferred to the ward on POD 1, engaged in progressive monitored ambulation and were considered for discharge home on day 3 or 4.

Results:
Over the last year (January 1st - December 31st, 2020), 1981 cardiac surgeries were performed. There was 43% (856/1981) isolated CABG, 12% (240/1981) isolated valve replacement and 11% (218/1981) isolated valve repairs. 5.65% (112 patients) were admitted on the day of their surgery. There were 58% (273/472) of patients who were seated a first time on the day of surgery, 6% (30/472) were mobilized a second time in the chair on POD 0 and 63% (298/472) were doing their first walk on POD 1. The mean hospital length of stay was 7.5 days in our non-ERACS patients vs 4.1 days for ERACS patients. There were 394 patients who had an early discharge at home POD 3 (88) or POD 4 (306). On POD 3, there were 17 valve replacement patients, 65 CABG patients and 6 valve repairs. On POD 4, 75 valve replacement patients, 183 CABG patients and 48 valve repairs patients were discharged. This represents a 59% increase in Day 3 and 18% in Day 4 for the same period of the previous year. Readmission rate in the 30 days following surgery was 6.7% in the total cohort and 3.8% (15/394) in patients with early discharge home. Cost savings were evaluated to be 2 899 113$ the last year. Patient's satisfaction was enhanced as measured by systematic phone calls to all day 3 and day 4 discharge patients. Thirty day mortality was 0% (0/394) for the standard pathway patients achieving criteria for early discharge.

Conclusions:
Implementation of an ERACS program leads to identification of patients that can be safely discharged as early as 3 days after cardiac surgery. These measures can lead to better and safer care, centered on patients values, with major cost saving, without significant impact on mortality or readmission rates.

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