

## Predictors of Long In-Hospital Stay After Cardiovascular Surgery

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Introduction: Cardiovascular surgery is the first option treatment in many diseases. Long in-hospital stay after CVS has direct impact in CVS costs/effectiveness ratio. The predictors of LHS are not consistently determined in literature. Objectives: To describe the population and evaluate predictors of LHS. Materials & Methods: Male and women older than 18 years old, referred to CVC in Favaloro Foundation between 2004 and 2007, were included. The procedures were divided in coronary bypass graft (CABG, n=1209), valve replacement or repair (VRR, n=703) or both (COMB, n=444). The data of post surgery in-hospital stay were separated in tertiles. LHS was defined as an in-hospital stay in the 3rd tertile for each surgery (CABG > 10, VRR > 12 and COMB > 10 days). Baseline characteristics of patients were assessed and compared in the three groups. Independent predictors of LHS were calculated by multiple logistic regression. Results: Patient baseline characteristics are present in Table 1. VRR group had more women than the others (VRR 45.5%, CABG 16%, COMB 26.8%, p<). CABG group revealed a high prevalence of coronary risk factor (diabetes 27.9 %, p<0.0001; hypertension 70.4%, p<0.0001; dyslipidemia 80.6%, p<0.0001; smoking 61.5%, p<0.0001). Multivariate analysis showed age (p<0.0001), ejection fraction (p<0.01), urgent-emergent (p<0.0001) and chronic kidney disease (p<0.005) as independent predictors of LHS in CABG. In VRR group, independent variables associated with LHS are urgent-emergent (p<0.001), chronic kidney disease (p<0.005), diabetes (p<0.05) and tricuspid intervention (p<0.01). Finally, urgent-emergent (p<0.05), ejection fraction (p<0.005), chronic kidney disease (p<0.01) and mitral intervention (p<0.01) independently predicted LHS in COMB group.

	CABG	VRR	COMB	p (Kruskal-Wallis ANOVA)
n	1209	703	444	
Age (years)	63.9 ± 9.6	58.9 ± 15.2	69.4 ± 9.3	< 0.0001
In-hospital stay	11 ± 11.8	13.2 ± 12	16.5 ± 17.8	< 0.0001

Conclusion: Association of independent variables is a useful tool in prediction of LHS. Development of scores that include combination of this variables, adjusted to CABG, VRR and COMB may be of great utility.