



Poster # 17

Title of poster: Preliminary Data Informing the PREHAB Study - Pre-operative Rehabilitation for Reduction of Hospitalization After Coronary Bypass and Valvular Surgery

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Abstract

Introduction: The emerging concept of frailty has been shown to predict postoperative risk in patients undergoing cardiac surgery. Therefore, it is critically important for the health care team to identify strategies that will “de-frail” patients prior to surgery and optimize preoperative risk factors.

Study 1: The purpose of this study was to prospectively examine the prevalence of frailty in patients undergoing cardiac surgery. In a cohort of 133 patients, 54% were classified as frail according to the Modified Fried Criteria. Frailty was correlated with increased postoperative hospital length of stay (LOS), where frail patients had a median hospital LOS of 8 days compared to 6 days in non-frail patients (p 7 days compared to just 37 % in non-frail, cardiac surgery patients (p<0.02). These results demonstrate the high prevalence of frailty in patients undergoing cardiac surgery and an association between frailty and prolonged hospital LOS.

Study 2: In Canada, when elective patients require cardiac surgery, they are placed on a waiting list ranging from 3 to 4 months. Although cardiovascular rehabilitation has been shown to improve patient health outcomes, patients are not referred to an intervention until after surgery. Thus, we conducted a study to determine the feasibility of implementing an exercise therapy plus health education intervention prior to elective coronary artery bypass graft (CABG) surgery. Seventeen elective CABG patients were randomized to standard care (StanC; n=9) or “prehabilitation” (Prehab; n=8). Data was collected at baseline, 1-2 weeks preoperatively (Preop), and three months postoperatively. Walking distance was assessed by a 6-minute walk test. Walking distance was chosen as the primary outcome as it is correlated with physical fitness, a parameter known to influence postoperative outcomes after CABG surgery. Fifteen patients completed the study (StanC, n=7; Prehab, n=8). Walking distance remained unchanged in the StanC; whereas Prehab patients walked +132 and +145 meters more at Preop and three months postoperatively, as compared to baseline (p 7 days).

