Title: Interim Analysis of the Pre-Operative Incentive Spirometry Education (POISE) Intervention

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Introduction: Few studies address effects of pre-operative incentive spirometry (IS) education interventions (POISE) on post-operative patient outcomes.

Identification of the Problem: Achieving effective inspiration sooner post-operatively may decrease post-operative pulmonary complications and length of stay.

Purpose of the Study: Determine the effect that the POISE intervention has on post-operative outcomes for patients undergoing knee or hip total joint replacement.

Methodology: Prospective study of 100 total joint patients randomized in a 1:1 ratio to Group 1 (POISE) or Group 2 (no intervention). Subjects are followed until discharge or up to 7 days post-operatively to determine the time for return to baseline IS. Data is also collected on demographics, comorbidities, and length of stay. The POISE intervention includes scripted pre-operative education on incentive spirometry use, patient practice and levels documentation.

Results: The majority of subjects (N=69: Group 1=34; Group 2=35), were Caucasian (Group 1=94%; Group 2=86%) females (Group1=62%; Group 2=60%); average age was 61 and 64 years. At discharge, the % of population with IS levels ≥ 80% of baseline was greater for Group 1 (97.0%) than Group 2 (85.7%), and Group 1 had fewer post-operative pulmonary complications, and shorter LOS (Group 1=2.4 days; Group 2=2.7).

Discussion: Results support further research.

Conclusion: The POISE intervention suggests improved patient outcomes.

Implications for Perianesthesia Nurses and Future Research: The POISE nursing intervention may be an easy, inexpensive method to improve surgical patient post-operative outcomes.