

A Standardized Stir-up Regimen Shortens Phase I Recovery Time in PACU

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Introduction: The nursing actions to recover patients after surgery have been described as the "Stir-up Regimen." This quality improvement study evaluated the impact of a standardized Stir-up Regimen on PACU Phase I recovery time.

Identification of the problem: Nursing care during Phase I varied among PACU nurses which affected recovery time and patient throughput.

QI question/Purpose of the study: To implement a standardized Stir-up Regimen (deep breathing, coughing, repositioning, mobilization, managing pain and nausea) within the first 30 minutes of PACU arrival, with the goal of decreasing PACU Phase I recovery time.

Methods: A pragmatic stepped wedge cluster randomized control trial (RCT) with PACU units as randomized clusters (n=3), in an academic hospital in the United States. A longitudinal design with control (baseline), and intervention (standardized Stir-up Regimen implementation) over 26 weeks from May to October 2021. This was not human subject research per the local Institutional Review Board. Inclusion criteria were adult surgical PACUs, with patients who received at least 30 minutes of general anesthesia. Differences in PACU Phase I time between intervention and control were evaluated using generalized mixed-effects models (GLMM).

Outcomes/Results: In three PACUs, a total of 5,809 adult patient encounters met inclusion criteria. Control (n=2,860) and intervention (n=2,949) had similar demographics. Overall, the adjusted mean difference in Phase I recovery time between control and intervention was a reduction of 4.9 minutes (95% CI: -8.4 to -1.4, p=0.007). One of the three PACU decreased time by 9.6 minutes (95% CI: -15.3 to -4.0, p<0.001).

Discussion: Standardizing the Stir-up Regimen during Phase I improved PACU efficiency and throughput, without patient harm, when scaled over time.

Conclusion: Implementation of a standardized Stir-up Regimen for surgical adult patients, within 30 minutes of PACU arrival, resulted in decreased Phase I recovery time.

Implications for perianesthesia nurses and future research: The stepped wedge cluster RCT is a novel design to test the effectiveness of a nursing intervention across multiple settings. Future research is needed to assess the standardized Stir-up Regimen in various PACU settings.