Bays, Bottlenecks, and Better Flow Improving PACU Throughput When Space is Tight

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Abstract Background Information: From 2024–2025, Virtua Marlton experienced a rapid expansion in surgical and procedural volume, growing from five to seven operating rooms and adding a second endoscopy suite, with plans for an eighth OR underway. Throughput more than doubled, resulting in significant workflow strain within the Surgical Prep Area (SPA)/Same Day Surgery (SDS) and Post Anesthesia Care Unit (PACU). Inefficiencies in bay assignment, delayed transfers, and staffing shortages led to procedural delays, operating room holds, decreased patient satisfaction, and staff frustration.

Objectives of Project: The project aimed to improve surgical services throughput and patient flow by:

- Reducing PACU and SDS bottlenecks.
- Enhancing communication between the OR, PACU, and SDS.
- Establishing sustainable staffing and process solutions to support patient safety, satisfaction, and operational efficiency.

Process of Implementation: Using the Plan-Do-Study-Act (PDSA) model, SPA and PACU leadership implemented multifaceted changes:

- SPA/SDS: Added two nursing positions for extended coverage and designated two Phase II recovery nurses per shift responsible for all same-day discharges. A radiology overflow area with three additional bays was established for high-volume days.
- PACU: Introduced a dedicated charge nurse “out of the count” and piloted several bay assignment workflows. The final process—preassigning bays in the EHR when patients became PACU-pending—proved most effective, reducing confusion and improving preparedness. OR staff now verify bay availability prior to transfer, preventing unplanned arrivals.
- The Phase II process was restructured so that Phase II nurses, not PACU nurses, assume care immediately after Phase I recovery, aligning with best practices at sister hospitals.

Statement of Successful Practice: Following implementation, PACU-to-Phase II throughput times averaged 68 minutes (2025 YTD) compared to 64 minutes (2024), while Phase II-to-discharge times improved from 53 to 47 minutes. Staff reported greater workflow clarity and less stress with bay management and handoffs. Patient satisfaction rose from 91.5% (September 2024) to 100% (June 2025), and OR turnaround times improved from 37 to 32 minutes, reflecting overall gains in efficiency and team performance.

Implications for Advancing the Practice of Perianesthesia Nursing: This project demonstrates how structured communication, use of the PDSA model, and EHR-based workflow tools can improve throughput and nurse satisfaction. These process-driven

strategies enhance teamwork, efficiency, and recovery care—offering a replicable model for other perianesthesia settings.