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## 901.HEALTH SERVICES AND QUALITY IMPROVEMENT - NON-MALIGNANT CONDITIONS

**Reducing Operating Room (OR) Cancellations: Results from a Quality Improvement Study from a Tertiary Care Children's Cancer Center**

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**Introduction:** Operating Room (OR) is a critical resource that may be used inefficiently in pediatric hematology oncology services and surgical cancellations is a major cause of OR underutilization with major implications on cost-savings, patient satisfaction, quality-of-care and hospital metrics. The purpose of this performance improvement (PI) study was to reduce the surgical cancellation rate by 10% (Pre-PI cancellation rate, 22%) at pediatric hematology oncology services at a large tertiary care children's cancer center in Riyadh, Saudi Arabia. **Methods:** Plan, Do, Study, Act (PDSA) cycle was adapted as project methodology on this performance improvement study. Preoperative checklist was created using REDCap electronic data capture tool hosted at our institution, also served as project database. Daily OR -Huddle was conducted to identify key points of intervention that included customized medical plans involving provision of pre-anesthesia evaluation clinic, sub-specialized inpatient and outpatient consultations, blood product support, while intervention required for improved communication included patient and nursing education. Patients were re-evaluated and preoperative checklist rechecked for provision of 24-hour notice of cancellation to the OR-scheduling team. All elective procedures scheduled between November 2021 and December 2022 were included, cancelled procedures were examined to identify potential reasons. **Results:** During the PI period, a total of 1063 elective surgical procedures were scheduled, majority 77% (816) were line-related, followed by bone marrow harvest in stem cell transplant donors, 11% (118); dental extraction and restoration, 6% (63); bone marrow aspiration or biopsy, 4% (47) and other (lumbar puncture, Intrathecal chemotherapy etc.) procedures, 2% (19). Majority 58% (621), of the procedures scheduled for malignant diagnoses; followed by stem cell harvests or patients requiring line-insertion for stem cell infusion in 29% (308) and non-malignant diagnoses in 13% (134). Post-intervention, surgical cancellation observed in 54 cases, with majority 93% (50) being line-related cancellation. When compared to the pre-intervention period (12 months prior to PI-project initiation) rate of surgical cancellation dropped from 22% to 5% resulting in 17% improvement. Root cause analysis reports a significant decrease in cancellation related to inappropriate preoperative workup, 40%; followed by comorbid conditions related to patients disease requiring sub-specialized consultation in 29%; insufficient routine blood tests in 19% and inappropriate patient education in 8%. The preoperative checklist was approved and adapted as standard of care - clinical pathway to be integrated with the institutional Electronic medical records. **Conclusion:** In our experience, the observed high rate of elective OR cancellations were associated with ineffective preoperative workflow, team communication, patient coordination and education. Post-intervention measures enabled a visual system to harmonize patients' preoperative progress and the multi-disciplinary, daily OR-Huddle allowed lean-decision minimizing "last minute" cancellations. These interventions are easy to replicate against available resources by other tertiary care centers to improve inefficient OR utilization. Cost-effectiveness analysis resulting from the improvement is warranted.

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