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Streamlining preoperative testing in endourology

In this edition of *CUAJ*, Moussaoui et al examined the implementation of a clinical dashboard to reduce unnecessary preoperative investigations for patients undergoing endourologic procedures at two Canadian centers.[1] The authors highlight that examining baseline local perioperative transfusion rates over a three-year period allowed for the development of preoperative indications for type and screen (T&S) testing before percutaneous nephrolithotomy (PCNL), transurethral resection of the prostate (TURP), transurethral resection of bladder tumors (TURBT), and holmium laser enucleation of the prostate (HoLEP).

By implementing these testing indications, the authors were able to reduce overall preoperative T&S testing, along with CO_2 emissions, without compromising patient safety. This novel study builds upon a growing body of literature focused on the safe and efficient optimization of health resource utilization by targeting an upstream point of care during preoperative patient evaluation.[2,3]

Several studies have focused on reducing the downstream use of transfusion blood products with the successful implementation of clinical dashboards or default single-unit transfusion order sets, which reduce unnecessary transfusions.[2] Beyond the goals of maintaining safe patient care while reducing resource utilization, Makuria et al emphasize that tracking key performance indicators, like transfusion rates, within an easily accessible dashboard can be useful for department heads and hospital administrative oversight.[3] Similarly, these dashboards could be applied to standardize comparison of patients undergoing endourologic surgery to curb a wasteful or convenient shotgun approach to preoperative investigations.

In the current study, by examining baseline transfusion rates and applying that data to implement literature-supported thresholds for preoperative testing, the authors have successfully reduced healthcare costs of unnecessary testing without impacting patient safety. This impact was observed within the T&S rates for the target composite cohort, as well as within each individual cohort, highlighted by a >50% reduction in preoperative testing for patients undergoing TURP. Given the overall low rate of bleeding complications and transfusion rates that were observed, future studies could compare tighter thresholds for omitting type and screening testing.

Although the study was not designed to reduce perioperative transfusion rates, the authors comment that concurrent advancements in surgical technique and technologies have impacted bleeding complications for many endourologic procedures. They noted a background decline in preoperative T&S testing for patients undergoing PCNL without implementing a strict testing threshold. Despite this reduction in T&S preoperative testing for PCNL, they did not observe an increased rate of transfusion or rescue transfusion events.

This is further supported in the literature when examining historic trends in transfusion rates for endourologic procedures or examining the increasing patient complexity and comorbidities that are safely undergoing contemporary surgeries.[4,5] Building upon this publication, these ongoing surgical advancements, combined with iterative quality-assessment studies, could lead to stricter evidence-based thresholds for which patients should be receiving preoperative testing for type and screen, with an aim to further reduce unnecessary patient investigations and healthcare costs.

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