Bypassing the post-anaesthesia care unit after elective hip and knee arthroplasty

We read with interest the prospective cohort safety study by Nielson et al. [1]. The paper describes what appears to be a safe process of resource utilisation to improve theatre and PACU efficiency in their centre. For this process to be transferrable to other hospitals, and indeed other healthcare systems, we require more information regarding the ward processes and human factors considerations that are needed to implement this positive development.

There are currently estimated to be seven million patients awaiting elective surgery in England, with approximately 800,000 of these requiring trauma and orthopaedic surgery [2]. In light of this backlog, any proposal that may improve the efficiency of operating theatre lists while maintaining patient safety is to be commended. The authors present predefined selection criteria for patients deemed suitable for bypassing PACU. These criteria appear justified because patients who were transferred straight to the ward did not suffer adverse events and were discharged earlier than patients who required PACU care. It is likely that these positive outcomes were not because the patients were transferred straight to the ward but rather due to careful patient selection. Our first query is how the authors decided on the predefined criteria and, secondly, if they have plans to further validate their scoring system in other centres. They note that a randomised controlled trial may be needed. We are concerned that this may prove impractical with difficulty in randomisation, and to obtain a meaningful patient-centred primary outcome would require many patients for a relatively small intervention.

Instead, we propose that this successful trial of bypassing PACU with carefully selected patients could be individualised to institutions. For this to be possible, more information is needed about the context of this particular Danish hospital and the practicalities of this study. The Standards for Quality Improvement Reporting Excellence (SQUIRE) guidelines exist to provide a framework for the reporting of system level work that aims to improve quality, safety and value of healthcare [3], with a particular focus on the context of the study. Without a better understanding of the study's context we would caution against adoption of this intervention as there may be significant unintended consequences. We wonder if the authors considered undertaking a hierarchical task analysis [4] and failure mode effect analysis [5] to explore the likelihood and impact of unintended consequences and their suitable mitigation. In particular we would like to know how the intervention was received by staff and whether any challenges arose during the implementation. For translation to other centres, the details of the postoperative ward are also important, for example, how the layout of the

ward aids monitoring; how often monitoring was performed; did the postoperative analgesic plan change for ward patients and what are the staffing ratios on the postoperative ward?

Finally, this project appears to have been a positive intervention in their centre. Is it now standard practice and used in other centres in Denmark?

This study has important implications for changing routine care pathways and we congratulate the authors on the development of a successful pathway to improve operating theatre flow with no detriment to patients.

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