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Nurse-run preanaesthesia assessment clinics: an initiative towards improving the quality of perioperative care at the Hospital

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Abstract

Introduction: Implementing nurse-led preoperative assessments has become a standard practice in ambulatory surgery settings. However, in the Middle East, this practice is relatively new and requires careful planning and preparation. This audit aims to evaluate the feasibility and quality of preoperative assessments conducted by specially trained nurses, assess patient and nurse satisfaction, and evaluate overall perioperative quality of recovery.

Methods: Nurses underwent selection and training through an accredited program. Following this, a 3-month implementation period allowed nurses to gain experience in conducting preoperative assessments. A four-step audit was then conducted to evaluate the quality of preassessment, patient satisfaction, quality of recovery, and any adverse events. Additionally, nurses' satisfaction with their advanced role was monitored.

Results: The quality of preoperative assessments by specially trained nurses showed high compliance, with 95% adherence to accepted standards. Patient satisfaction surveys, involving 152 patients, indicated that all patients were either highly satisfied or satisfied with the nurse-led service. Nurses expressed high levels of satisfaction and felt valued in their roles. Postoperative follow-up via telephone calls with ambulatory care patients revealed high levels of satisfaction. No major or minor adverse events were reported.

Conclusion: Specially trained nurses demonstrated high-quality preoperative assessments without adverse events, and both patient and staff satisfaction levels were very high. Future research will focus on strategies to reduce surgery cancellation rates, evaluate the cost-effectiveness of this approach, and provide specialized training for nurses conducting pediatric preoperative assessments. This model of care may pave the way for additional nurse-led care models in the Middle East.

Keywords: anesthesia, audit and feedback, nurses, patient-centered care

Introduction

The concept of nurse-led preanaesthesia assessment has been in practice since the early 1990s, gaining widespread acceptance as surgery shifted from prolonged in-hospital stays to shorter-stay and day care pathways. Trained nurse specialists now commonly lead these services in many centers, taking on responsibilities such as assessing patients' suitability for anesthesia and surgery, conducting risk assessments, and coordinating necessary investigations or referrals. Nurses, often spending more time with patients, can better understand their concerns and expectations, offering education and counseling to alleviate anxiety. However, implementing such services requires careful consideration due to structural,

logistical, and cultural factors. Nurse-led initiatives remain limited in the Middle East, which hosts a diverse population from over 75 countries, presenting unique challenges in terms of expectations, respect, and trust towards nursing staff. (Hines et al., 2015)

Streamlining the preoperative trajectory became a focus, with patients scheduled for surgery having a single preoperative visit to meet the surgeon and undergo preanaesthesia assessment on the same day. To enhance workflow efficiency, a nurse-run, consultant anaesthetist-supervised preanaesthesia assessment clinic was planned as a quality improvement initiative, the first of its kind . The project aimed to reduce patient waiting times, improve patient comfort, tailor care based on patient categories, reduce surgery cancellations, standardize patient assessment, highlight nursing quality, and detect early postoperative complications. (Sau-Man Conny et al., 2016)

This audit evaluates the feasibility of first nurse-led preanaesthesia assessment and its impact on overall perioperative patient care quality. The hypothesis was that patients undergoing a nurse-led preanaesthesia assessment would experience increased satisfaction and better preparedness for surgery. The project also serves as a proof of concept for future nurse-led initiatives. (Hibbert et al., 2017)

Nurses underwent 25 hours of structured training and self-study, focusing on using NICE guidelines for ordering preoperative tests, hospital protocols for managing diabetes and hypertension, and medication instructions. Simulation sessions during a 3-month preimplementation period allowed nurses to gain clinical experience under supervision. Nurse-run clinics officially commenced on 24 December 2017, with low to medium-risk patients assessed by nurses under indirect supervision, while high-risk patients were evaluated by an anaesthesiologist. Standardized preanaesthesia evaluation templates were used, adapted to the electronic chart system for easy access and documentation. Patients were informed about anesthesia types, fasting guidelines, and medications during the assessment process. (Passarelli et al., 2021)

Materials and Methods

Audit Design and Subjects

This retrospective observational audit was conducted at the Ambulatory Care Centre (ACC) over the period from January 2018 to December 2018, comprising four steps.

Firstly, patient files from the nurse-run preanaesthesia clinic were randomly selected for auditing the efficacy of preoperative assessment. The audit aimed to evaluate the completeness and quality of preoperative evaluations using a data collection sheet.

Secondly, a patient satisfaction survey was administered immediately after the preanaesthesia assessment. Patients were randomly chosen, and their satisfaction with the quality of nurse-run preanaesthesia assessment was assessed using a bilingual questionnaire (Arabic and English).

Thirdly, a postoperative quality of recovery survey was conducted among randomly selected patients. After surgery, these patients were contacted via telephone by nurses to assess their postoperative quality of recovery using the internationally validated QoR 15 survey questionnaire.

Lastly, the satisfaction of nurses actively involved in the project was evaluated using a standardized questionnaire.

The performance of anaesthetists was not within the scope of this audit and was not investigated.

Statistical Analysis

As this audit aimed to assess perioperative care quality, all collected data were tabulated, analyzed, and expressed in percentages using descriptive statistics, following standard procedures.

Results

Quality of Preanaesthesia Assessment

The audit reviewed 100 patient files, all of which had undergone preoperative assessment by specially trained nurses and were documented accordingly. Key findings include:

- 80% of cases had a brief summary at the beginning of each patient report.
- Specific anaesthesia history and co-morbidities were documented correctly in 100% of cases.

- Physical examination details such as body mass index and exercise tolerance were reported in 91% of cases.
- Important factors like airway documentation and system-wise examination were reported in all cases.
- Current medications and allergies were correctly mentioned in 100% of cases.
- Classification into appropriate ASA categories and justification were done correctly in 93% and 91% of cases, respectively.
- Risk assessment and anaesthesia planning were sufficient in 86% of files.
- Postoperative pain management plans were described in 98% of files.
- None of the ASA-1 or ASA-2 patients required further assessment by a consultant anaesthetist, and no process breakdowns were noted. Only one case was cancelled due to high blood pressure on the day of surgery.

Patient Satisfaction Survey

Among 152 surveyed patients:

- 84% rated the quality of service as very good, and 15% rated it good.
- 91% felt their privacy was respected, and the service was transparent.
- 94% perceived the nurses as competent for preanaesthesia assessment.
- All patients rated the nurses as professional or very professional.
- 100% were satisfied or highly satisfied with the quality of care.
- 58% would recommend others to be assessed by a specialized nurse, 24% a physician, and 18% either a nurse or a physician.

Postoperative Quality of Recovery

Of 816 patients surveyed postoperatively:

- 85% were highly satisfied with the overall perioperative experience.
- No complications were reported.

Nurses Satisfaction Survey

Among 11 participating nurses:

- 83% felt they would benefit from more training, regular meetings, updates, and feedback.
- All believed they could improve their clinical skills and medical knowledge with rigorous training.
- 83% felt their service was highly valued by multidisciplinary teams.
- 66% were confident in running clinics independently without direct anaesthesiologist support.
- All saw this as an excellent opportunity to build teamwork and clinical experience.

Discussion

The introduction of nurse-run preanaesthesia assessment in our setting marks a significant step towards enhancing perioperative care and patient experience. Our findings demonstrate the feasibility and success of this practice, supported by high levels of acceptance and satisfaction among patients and nurses. (Hibbert et al., 2017)

The meticulousness exhibited by our specially trained nurses in conducting preoperative assessments is commendable, with a compliance rate of 95.3% to accepted standards. This level of accuracy aligns with previous studies showing nurses' proficiency in history taking and assessment. Notably, the absence of adverse events during operations underscores the safety and quality of nurse-led assessments, a finding consistent with existing literature that highlights comparable safety and satisfaction outcomes between nurse-led and doctor-led assessments. (Helkin et al., 2017)

Patient satisfaction surveys further validate the positive impact of nurse-run assessments, with a high percentage of patients expressing satisfaction with the quality of service received. These results are particularly noteworthy given the moderate acceptance of nurses' roles in our medical environment, indicating a growing recognition of their capabilities in delivering high-quality care. (Arbabi et al., 2018)

Introducing additional initiatives such as preoperative phone calls has contributed to reducing surgery cancellations and enhancing patient safety postoperatively. The implementation of these measures reflects a commitment to improving efficiency and patient outcomes across the perioperative care continuum. (Appavu et al., 2016)

The satisfaction survey among specialised nurses underscores their dedication and enthusiasm for their new responsibilities. Their feedback highlights the importance of ongoing training, feedback mechanisms, and professional development opportunities to ensure continued success and prevent burnout. (Edward et al., 2008)

Looking ahead, future projects will focus on further refining the nurse-run model, exploring cost-effectiveness, expanding training for paediatric assessments, and fostering collaboration between key stakeholders. This model of care has the potential to serve as a blueprint for similar nurse-led initiatives in the Middle East, contributing to standardised care, improved patient flow, and enhanced quality of perioperative care overall. (Choi et al., 2016)

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