

Enhancing Post-Operative Neuromuscular and Neurovascular Assessment Documentation Compliance in Total Joint Replacement Patients: A Quality Improvement Initiative

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Introduction: Post-operative neuromuscular and neurovascular (NM/NV) assessments are crucial for early detection of complications in total joint replacement patients. Inconsistent documentation and varying assessment techniques can lead to delayed recognition of post-operative complications, potentially compromising patient outcomes.

Identification of the Problem: Chart audits revealed that only 72% and 61% of required NM/NV assessments were properly documented, with significant variations in assessment techniques among nurses. Approximately 40% of the documented assessments lacked one or more critical components as defined by organizational standards.

QI Question/Purpose of the Study: This quality improvement project aimed to:

1. standardize NM/NV assessment documentation practices,
2. increase documentation compliance to greater than 90%, and
3. improve the completeness and accuracy of assessments in post-operative total joint replacement patients.

Methods: A pre/post-intervention design was implemented over 23 months in a 25-bay post-anesthesia care unit. Interventions included:

- Development of a standardized electronic health record documentation template
- Implementation of an evidence-based NM/NV assessment protocol
- Creation of bedside reference tools
- Mandatory staff education sessions
- Peer review process
- Real-time audit and feedback system

Data collection included chart audits and direct observation of assessment techniques. Assessment compliance and completeness were measured monthly.

Outcomes/Results: Post-intervention results demonstrated:

- Documentation compliance increased from 72% to 94% and 61% to 98% for NM/NV respectively
- Zero missed complications due to inadequate assessment during the study period

Discussion: The multi-faceted approach addressed key barriers to consistent NM/NV assessment documentation. The standardized template and protocol significantly improved assessment quality and documentation compliance. Staff education and regular feedback were crucial for sustaining improvements.

Conclusion: Implementation of standardized documentation processes and evidence-based protocols, combined with comprehensive staff education, effectively improved the

quality and consistency of post-operative NM/NV assessments in total joint replacement patients.

Implications for perianesthesia nurses and future research: This quality improvement initiative provides a framework for:

1. Implementing standardized assessment protocols in perianesthesia settings
2. Improving documentation compliance through systematic approaches
3. Enhancing early detection of post-operative complications
4. Supporting evidence-based practice in post-operative care

Further investigation is recommended to:

- Evaluate long-term sustainability of improvements
- Assess impact on patient outcomes and length of stay
- Explore application to other surgical populations
- Develop automated compliance monitoring systems
- Investigate correlation between assessment quality and complication rates