

# Enhancing Post-Operative Neuromuscular And Neurovascular Assessment Documentation Compliance In Total Joint Replacement Patients: A Quality Improvement Initiative

Juanita Hackshaw, BSN, RN, CPAN • Veronica Leigh, BSN, RN, CPAN • Christina Bohraus, BSN, RN, CPAN, CAPA • Heather Burton, MSN, RN, NEA-BC, CNOR • Kaitlynn Blumenthal, BSN, RN, CMSRN

## INTRODUCTION

Post-Operative neuromuscular and neurovascular (NM/NV) assessments are crucial for early detection of complications in total joint replacement (TJR) 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.

## PURPOSE OF THE STUDY

This quality improvement project aimed to:

- ▶ Standardize NM/NV assessment documentation practices
- ▶ Increase documentation compliance to greater than 90%
- ▶ Improve the completeness and accuracy of assessments in post-operative TJR patients

### ACKNOWLEDGEMENTS

PACU leadership and staff at Adventist HealthCare Shady Grove Medical Center; Director of Surgical Services, Heather Burton, MSN, RN, NEA-BC, CNOR; SGMC Joint Center of Excellence Coordinator, Kaitlynn Blumenthal, BSN, RN, CMSRN; Perianesthesia Education Specialist, Seema Hussain, MSN, RN, CPAN, CAPA

Contact: TBohraus@AdventistHealthCare.com

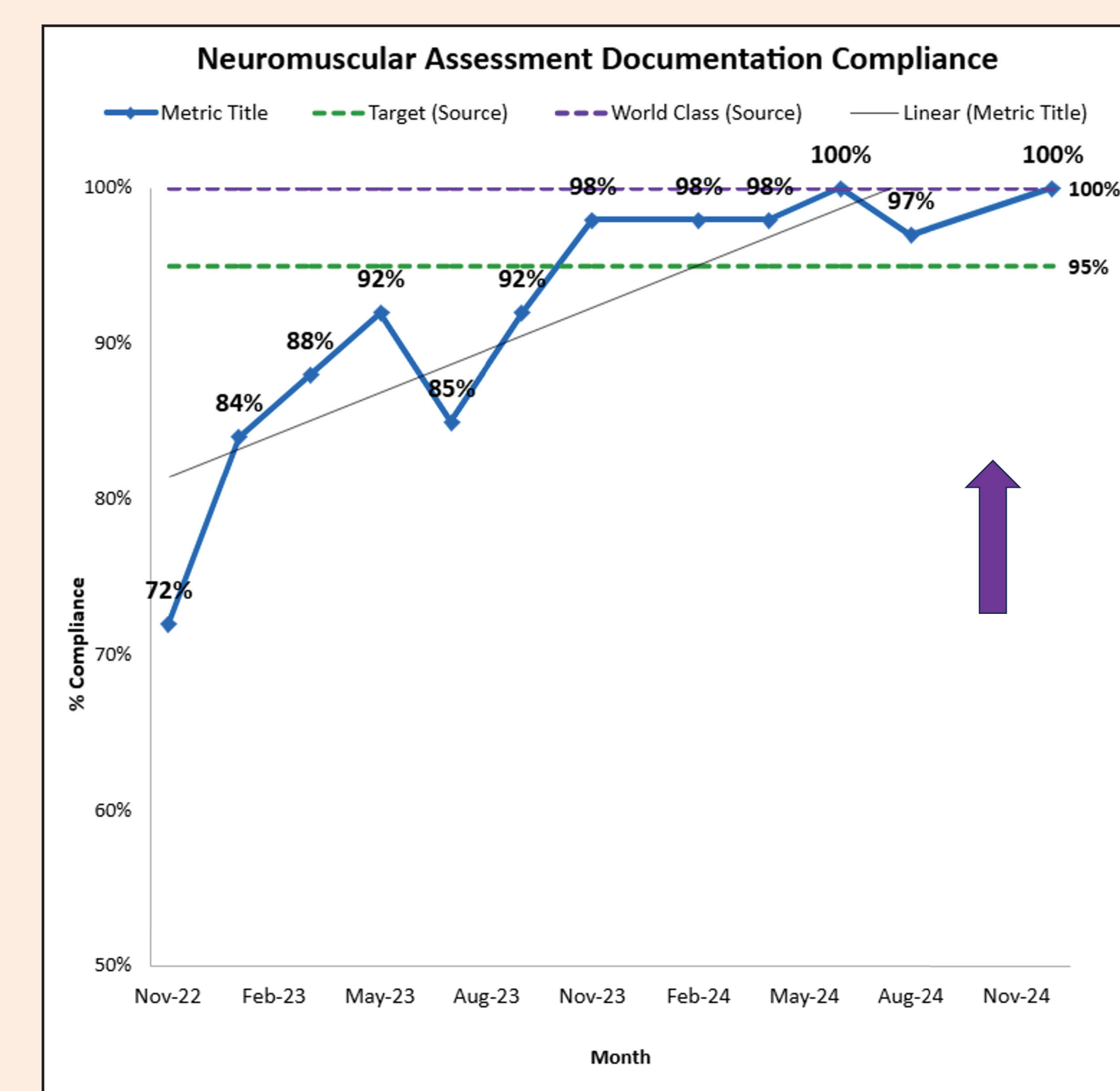
## METHODS

A pre/post-intervention design was implemented over 24 months in a 25-bay post-anesthesia care unit. Interventions included:

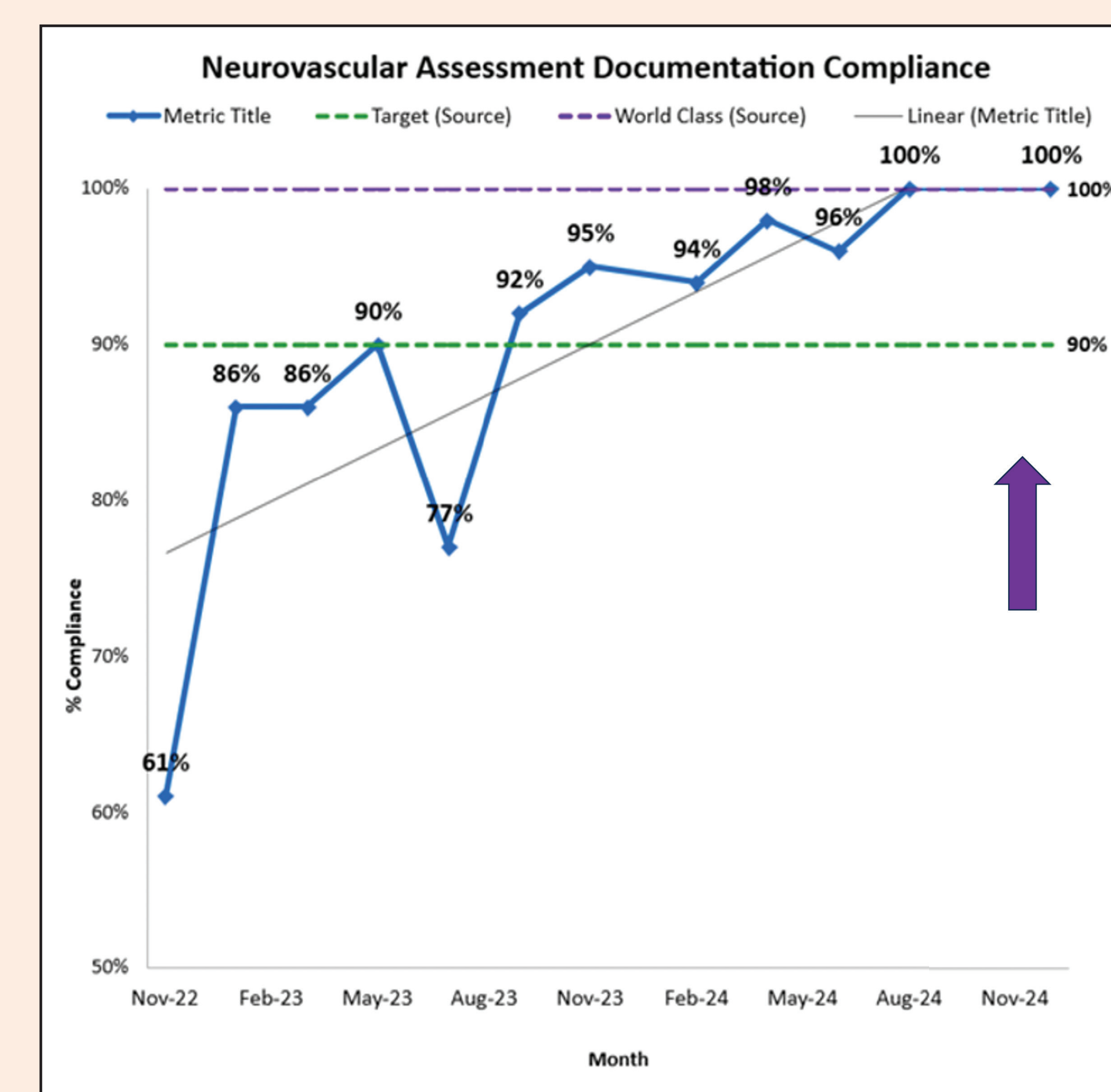
- ▶ Development of a standardized electronic health record documentation template
- ▶ Implementation of an evidence-based NM/NV assessment protocol
- ▶ Creation of bedside reference tools
- ▶ Mandatory staff education sessions
- ▶ Peer review process
- ▶ Real-time audit and feedback system
- ▶ Data collection included chart audits and direct observation of assessment techniques
- ▶ Assessment compliance and completeness were measured monthly and reviewed with staff during monthly staff meetings

## OUTCOMES

### Neuromuscular



### Neurovascular



## 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 TJR patients.

## IMPLICATIONS FOR PERIANESTHESIA NURSES AND FUTURE RESEARCH

This quality improvement initiative provides a framework for:

- ▶ Implementing standardized assessment protocols in perianesthesia setting
- ▶ Improving documentation compliance through systematic approaches
- ▶ Enhancing early detection of post-operative complications
- ▶ Supporting evidence-based practice in post-operative care

### Next Steps:

- ▶ Assess 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