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Research

Enhancing Post-Operative Pain Management for Improved Patient Outcomes

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Abstract

Background: Post-operative pain is one of the most common and distressing symptoms experienced by surgical patients. At Wadi Al Dawaser General Hospital, Riyadh Region, Kigdom of Saudi Arabia, audits revealed that 42% of post-operative patients reported moderate to severe pain within 24 hours post-surgery and only 58% of pain scores were documented within 30 minutes of assessment. These findings reflected inconsistencies in pain assessment, delayed interventions, and poor patient satisfaction.
Objective: This project aimed to improve post-operative pain management through standardized protocols, staff education, and improved documentation practices.
Methods: A quality improvement initiative was implemented from January to April 2025 in the female surgical ward. Key interventions included the introduction of a standardized pain assessment tool (Numeric Rating Scale), protocol-based reassessment timelines, staff education, and multidisciplinary coordination. Monthly audits and patient satisfaction surveys were used to assess outcomes.
Results: Average pain scores decreased from 6.5 in January to 5.2 in April 2025. Documentation compliance improved from 72% to 96%, and patient satisfaction with pain control increased from 60% to 82%. The interventions resulted in improved patient comfort, more consistent nursing practices, and increased staff accountability.
Conclusion: Structured protocols, ongoing education, and interdisciplinary collaboration significantly enhanced post-operative pain outcomes. Sustained improvements require continued audits and integration into daily workflows.

Keywords: Post-operative pain, Pain assessment, Nursing documentation, Patient satisfaction, Quality improvement, Pain protocol, Numeric Rating Scale (NRS).

INTRODUCTION

Pain after surgery is a predictable yet often poorly managed complication, affecting recovery, emotional well-being, and satisfaction. Inadequate pain control leads to prolonged hospital stays, complications like deep vein thrombosis or pneumonia, and decreased patient trust in care providers. At Wadi Al Dawaser General Hospital, baseline data highlighted substantial pain management gaps, particularly in documentation, protocol adherence, and staff training. This project addresses those deficiencies through a structured intervention aimed at enhancing post-operative pain management.

Aim

To improve the consistency and effectiveness of post-operative pain management among female surgical patients.

Objectives

1. To implement a standardized pain assessment tool (Numeric Rating Scale) across the unit.
2. To increase reassessment documentation compliance from 54% to at least 90%.
3. To reduce average pain scores by at least 1 point on a 0–10 scale.
4. To increase patient satisfaction regarding pain control by 20% within three months.
5. To train 100% of nursing staff in pain assessment and timely documentation.

METHODOLOGY

Study Design

Quality improvement project using a pre- and post-intervention comparative approach.

Study Setting

Female Surgical Ward, Wadi Al Dawaser General Hospital.

Study Participants

- Post-operative patients admitted between January and April 2025.
- Nursing staff responsible for pain assessment and medication administration.

Sample Size

Approximately 30–40 post-operative patients' monthly, totaling around 120 cases.

Intervention Process

- Baseline audit of pain scores and documentation practices.
- Selection and implementation of a single standardized tool: Numeric Rating Scale (NRS).
- Development and delivery of staff education on pain protocols.
- Incorporation of non-pharmacologic interventions and escalation pathways.
- Monthly monitoring of compliance, patient feedback, and data analysis.

Timeline

- **January 2025:** Baseline audit and team formation.
- **February 2025:** Protocol selection, documentation checklist rollout.
- **March 2025:** Staff training and pilot testing.
- **April 2025:** Full implementation and outcome review.

Post-Intervention Assessment

- Comparison of pre- and post-intervention average pain scores.
- Review of pain documentation compliance.
- Evaluation of patient satisfaction from survey responses.

Data Collection Tools

- Pain score audit checklist
- Documentation compliance form
- Patient satisfaction survey (Pain domain)
- Staff training attendance and feedback forms

Data Analysis

Descriptive statistics were used to assess trends in pain scores, compliance rates, and patient satisfaction. Graphical analysis included line charts and run charts to visually represent progress.

Ethical Considerations

Project approval was obtained from the Nursing Improvement Administration. Patient confidentiality was maintained. Participation in surveys was voluntary, and consent was implied through participation.

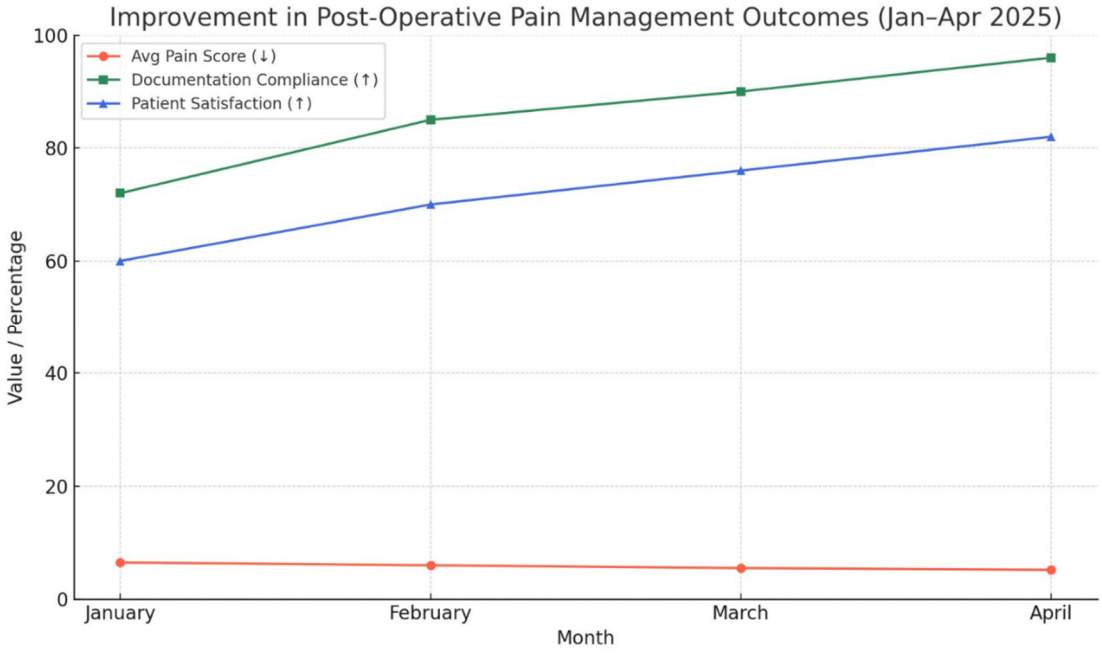
RESULTS

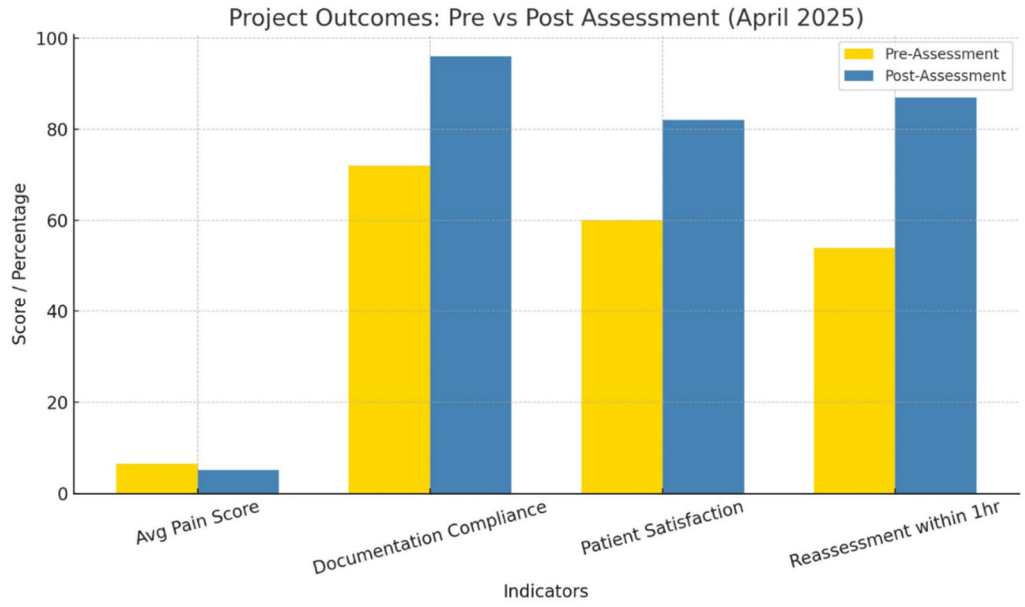
Pre-Assessment:

- **Average pain score:** 6.5/10
- **Documentation compliance:** 72%
- **Patient satisfaction with pain control:** 60%
- **Reassessment within 1 hour:** 54%

Post-Assessment (April 2025)

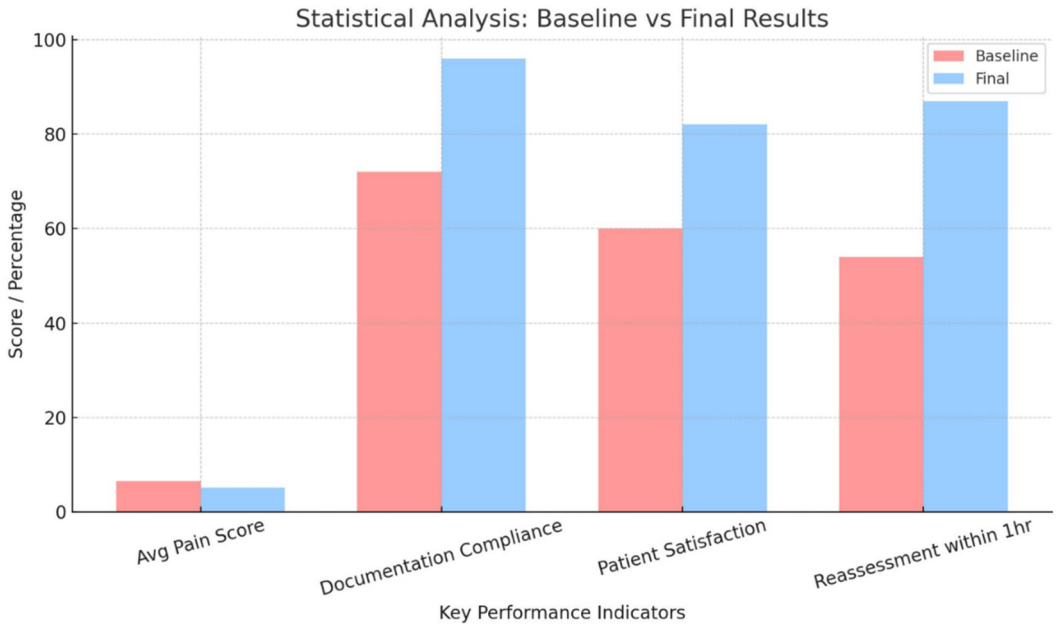
- **Average pain score:** 5.2/10
- **Documentation compliance:** 96%
- **Patient satisfaction:** 82%
- **Reassessment within 1 hour:** 87%





Statistical Analysis

- **Pain score reduction:** 6.5 → 5.2 (20% reduction), indicating improved analgesic timing and effectiveness.
- **Documentation compliance increase:** 72% → 96% (33% increase), attributed to staff training and EMR reminders.
- **Patient satisfaction improvement:** 60% → 82% (22% increase), reflecting better communication, education, and responsiveness.



Interpretation of Results

All key performance indicators showed significant improvement. The largest change was in documentation compliance, likely due to visible reminders and simplified protocols. The consistent downward trend in pain scores illustrates the success of multimodal analgesia and timely reassessments. Higher satisfaction scores demonstrate the effectiveness of patient engagement and education.

DISCUSSION

The findings align with existing literature that emphasizes the role of education, standardization, and multidisciplinary collaboration in improving pain outcomes. The project's success is credited to early stakeholder involvement, accessible training, simplified documentation tools, and regular feedback. Challenges such as staff resistance and varied knowledge levels were addressed by appointing unit champions and using motivational tools. The results emphasize the importance of integrating pain protocols into daily workflows and maintaining audit systems for long-term success.

CONCLUSION

This quality improvement project effectively addressed gaps in post-operative pain management by implementing a structured, protocol-based approach. The results demonstrated improved patient outcomes, staff compliance, and satisfaction levels. The initiative can be expanded to other units and sustained through policy integration, ongoing education, and routine monitoring.

REFERENCES

1. American Pain Society. (2019). *Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain*.
2. World Health Organization. (2023). *WHO Guidelines on Management of Chronic Pain in Adults*.
3. McCaffery, M., & Pasero, C. (2011). *Pain: Clinical Manual*.
4. Ministry of Health, Saudi Arabia. (2022). *Pain Management Guidelines in Inpatient Settings*.
5. Kumar, R., & Zargar, B. (2021). Improving Postoperative Pain Documentation through Nurse Education. *Journal of Nursing Practice*, 15(3), 145–150.