

# Perioperative Education Improvement Plan to Update Adherence to the Latest Evidence-based Guidelines

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## Introduction

- 40-50 million surgeries performed yearly in the US \*
- Estimated 15% of those patients will have serious post-operative morbidity \*
- Evidence and patient surveys show that patients are not receiving quality post-op education \*
- Post-operative complications, due to a lack of education, are common, highly debilitating, and costly \*
- Nursing intervention alone has shown to have marked improvement on patient outcome \*
- Evidence-based practice is the foundation of good patient care
- The constant changes in evidence can be cumbersome and labor-intensive for nurses

## Purpose

To determine if a multimodal learning resource and access to the latest evidence-based recommendation material for perioperative nurses is an effective method to increase nurses' knowledge and use of evidence-based guidelines in providing patient care.

## Specific Aims

1. Over a 12-week period, enhance nurses' knowledge of the latest evidence based post-surgical recommendations through implementation of an educational program.
2. Over a 12-week period, increase perioperative nurses' utilization of evidence-based resources material in providing patient care.

## Methods

### Design

Pre-post test QI project

### Setting

The main Surgical Unit with 16 OR, 23 pre-op & 23 PACU bays

### Sample

40 peri-operative nurses

### Intervention

Survey created was based on the validity and reliability of: Jolley (2000) "Post-operative nausea and vomiting: A survey of nurses' knowledge" and Farrell (2014) "Knowledge and Attitudes Survey Regarding Pain". Educational bundle based on evidence & validated by experts on the units.

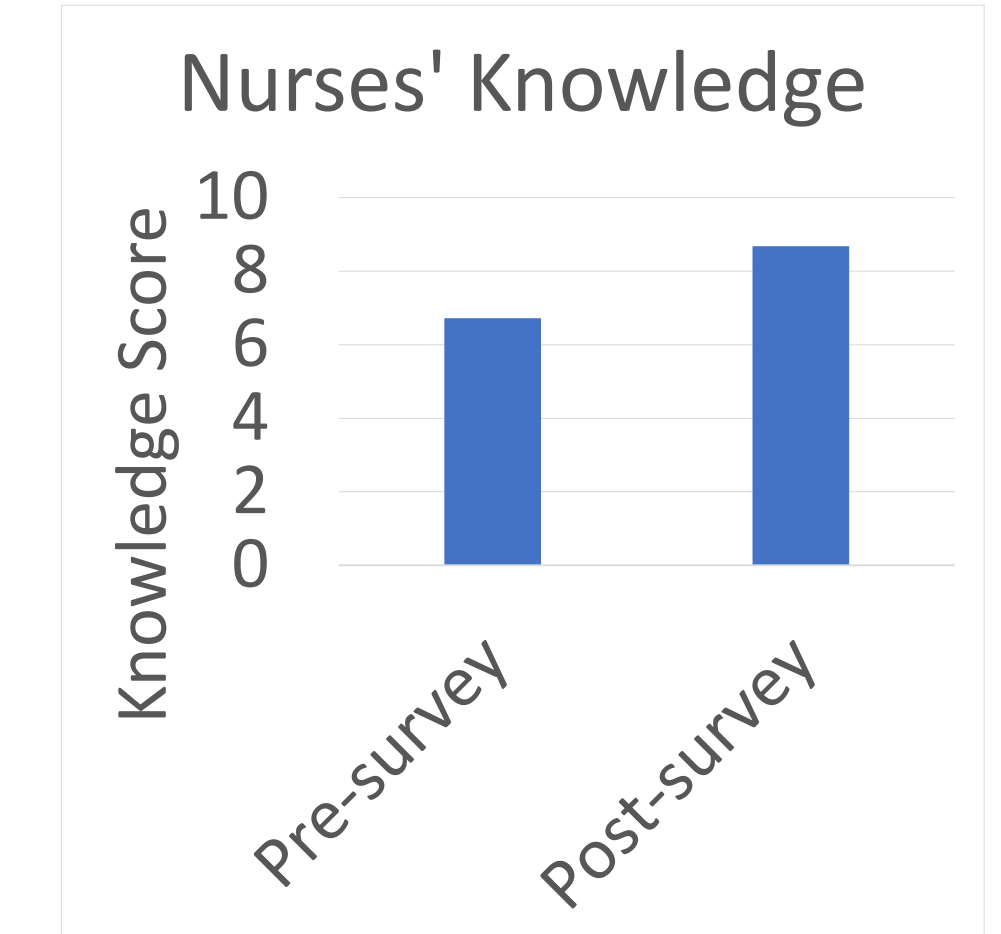
### Data Analysis

Qualtrics, Excel and SPSS Statistics 27 (IBM)

## Results

### Findings for Aim 1:

Knowledge test	N	M	(SD)	median
Pre-Survey	39	6.72	(1.731)	7
Post-Survey	31	8.68	(1.536)	9

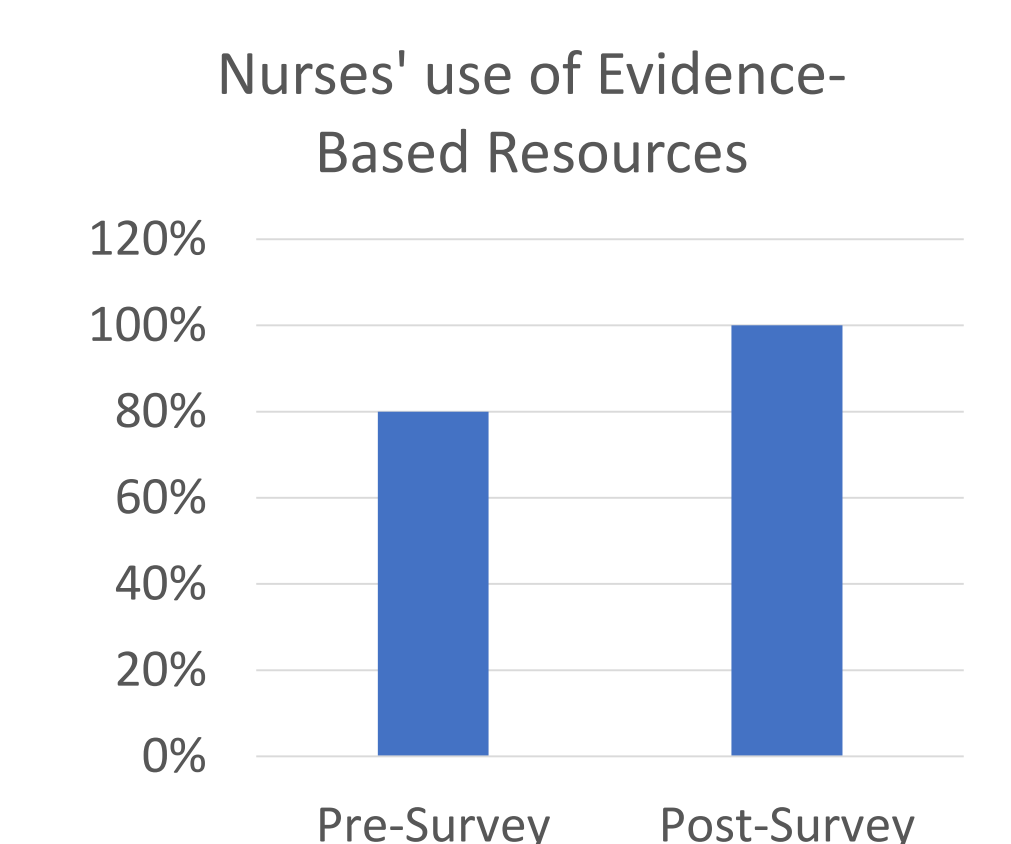


The results of the paired t-test showed a mean difference of 1.833 with standard deviation of 2.408 in the difference between the pre and post survey scores as evident by a  $p < 0.001$ .

### Findings for Aim 2:

"In the past 12 weeks, I have used evidence-based resources to guide patient assessment and practice" :

EBP Use	N	Yes	No
Pre-Survey	40	32	8
Post-Survey	31	31	0



## Conclusion & Dissemination

- This DNP quality improvement project emphasizes the effects of continuing education in nursing
- Shows the outcome of unit specific continuing educational for peri-operative nurses
- Dissemination in institution: nurses, educators and leaders
- The Association of Perioperative Registered Nurses (AORN) journal publication



- Agency for Healthcare Research and Quality (AHRQ). (2019). Hospital survey on patient safety culture version 2.0: User's guide. <https://www.ahrq.gov/sites/default/files/wysiwyg/sops/surveys/hospital/hospitalsurvey2-users-guide.pdf>
- American College of Surgeons. (2020). How many surgical procedures will Americans experience in an average lifetime? Evidence from three states. Retrieved from [https://mcacs.org/abstracts/2008/P15.cgi#:~:text=As%20medicine%20was%20practiced%20in,room%20invasive%20procedures\)%20per%20lifetime.](https://mcacs.org/abstracts/2008/P15.cgi#:~:text=As%20medicine%20was%20practiced%20in,room%20invasive%20procedures)%20per%20lifetime.)
- Arthur, H. M., Daniels, C., McKelvie, R., Hirsh, J., & Rush, B. (2000). Effect of a preoperative intervention on preoperative and postoperative outcomes in low-risk patients awaiting elective coronary artery bypass graft surgery. A randomized, controlled trial. *Annals of internal medicine*, 133(4), 253–262. <https://doi-org.proxy1.library.jhu.edu/10.7326/0003-4819-133-4-200008150-00007>
- Cassidy, M. R., Rosenkranz, P., McCabe, K., Rosen, J. E., & McAneny, D. (2013). I COUGH: reducing postoperative pulmonary complications with a multidisciplinary patient care program. *JAMA surgery*, 148(8), 740–745. <https://doi-org.proxy1.library.jhu.edu/10.1001/jamasurg.2013.358>
- Centers for Medicare & Medicaid Services. (2022, January 26). *Hospital: Mercy Medical Center*. Medicare.gov. Retrieved February 23, 2022, from <https://www.medicare.gov/care-compare/details/hospital/210008?id=acb4e7de-87ab-42c8-a334-10f27e859621&city=Baltimore&state=MD&zipcode=21224>
- Dang, D. & Dearholt, S.L. (2018). *Johns Hopkins Nursing evidence-based practice: Model & guidelines* (3rd Ed).
- Demir, F., Ozsaker, E., Ozcan, A. (2007). The quality and suitability of written educational materials for patients. *Journal of Clinical Nursing*, 17(2), 259-265. Doi: <https://doi.org/10.1111/j.1365-2702.2007.02044.x>
- Dobson, G. (2020). Trauma of major surgery: A global problem that is not going away. *International Journal of Surgery*, 81, 47-54.
- Johansson, K., Nuutila, L., Virtanen, H., Katajisto, J., & Salanterä, S. (2005). Preoperative education for orthopaedic patients: systematic review. *Journal of Advanced Nursing (Wiley-Blackwell)*, 50(2), 212–223. <https://doi.org/10.1111/j.1365-2648.2005.03381.x>
- Kang, E., Gillespie, B. M., Tobiano, G., & Chaboyer, W. (2020). General surgical patients' experience of hospital discharge education: A qualitative study. *Journal of Clinical Nursing (John Wiley & Sons, Inc.)*, 29(1/2), e1–e10. <https://doi.org/10.1111/jocn.15057>
- Khorfan, R., Shallcross, M., Yu, B., Sanchez, N., Parilla, S., Coughlin, J., Johnson, J., Bilimoria, K., Stulberg, J. (2020). Preoperative patient education and patient preparedness are associated with less postoperative use of opioids, *Surgery*, 167 (5), 852-858. DOI:<https://doi.org/10.1016/j.surg.2020.01.002>.
- Koivisto, J., Saarinen, I., Kaipia, A., Puukka, P., Kivinen, K., Laine, K., Haavisto, E. (2020). Patient education in relation to informational needs and postoperative complications in surgical patients, *International Journal for Quality in Health Care*, 32(1) 35-40. DOI: <https://doi.org/10.1093/intqhc/mzz032>
- Lopez, C., Hanson, C., Yorke, D., Johnson, J., Mill, M., Brown, K., Barach, P. (2017). Improving communication with families of patient undergoing pediatric cardiac surgery. *Progress in Pediatric Cardiology*, 45, 83-90. Doi: <https://doi.org/10.1016/j.ppedcard.2016.11.001>
- Mallett J. (1990). Communication between nurses and post-anaesthetic patients. *Intensive care nursing*, 6(1), 45–53. [https://doi.org/10.1016/0266-612x\(90\)90009-v](https://doi.org/10.1016/0266-612x(90)90009-v)
- Mercy Medical Center (2020). Mercy Fast Facts. Retrieved from [https://mdmercy.com/news-and-events/media-relations/mercy-fast-facts?sc\\_lang=en](https://mdmercy.com/news-and-events/media-relations/mercy-fast-facts?sc_lang=en)
- Moran, K., Burson R., and Conrad D. (2020). *The Doctor of Nursing Practice scholarly project: A framework for success*. (3rd ed.) Jones and Bartlett.
- Mousavi Malek, N., Zakerimoghadam, M., Esmaili, M., & Kazemnejad, A. (2018). Effects of Nurse-Led Intervention on Patients' Anxiety and Sleep Before Coronary Artery Bypass Grafting. *Critical care nursing quarterly*, 41(2), 161–169. <https://doi-org.proxy1.library.jhu.edu/10.1097/CNQ.0000000000000195>
- Pappa, M., Theodosiadis, N., Tsounis, A., & Sarafis, P. (2017). Pathogenesis and treatment of post-operative cognitive dysfunction. *Electronic physician*, 9(2), 3768–3775. <https://doi.org/10.19082/3768>
- Straus, S. E., Tetroe, J. M., & Graham, I. D. (2011). Knowledge translation is the use of knowledge in health care decision making. *Journal of clinical epidemiology*, 64(1), 6–10. <https://doi.org/10.1016/j.jclinepi.2009.08.016>
- U.S. Agency of International Development. (2011). The KAP survey model (Knowledge, Attitude, and Practices). <https://www.spring-nutrition.org/publications/tool-summaries/kap-survey-model-knowledge-attitudes-and-practices>
- Yilmaz, T. U., Gumus, E., & Salman, B. (2015). Problems in Communications with Patients in General Surgery Outpatient Practice. *The Eurasian journal of medicine*, 47(3), 184–189. <https://doi.org/10.5152/eurasianjmed.2015.65>

## Photo sources in order:

Getty Images: <https://www.benefitspro.com/2016/03/07/patients-arent-fond-of-er-doctors/?slreturn=20220319082908>

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