Sigma Theta Tau International’s 29th International Nursing Research Congress

Moving Patient Care Quality Forward by Benchmarking Nursing Care Performance

Huey-Shys Chen, PhD, RN, MCHES, FAAN
School of Nursing, Widener University, Chester, PA, USA
Yue Zhang, PhD
Department of Information Operations & Technology Management, College of Business and Innovation, University of Toledo, Toledo, OH, USA

Purpose:

Nursing’s influence on patient safety and healthcare outcomes have led to increased interest in benchmarking nursing care performance; however, there is a lack of research in healthcare literature that addresses both patient care quality and operational efficiency in the same study. The purpose of this proposed study is to benchmark nursing care performance and discover patient care quality deficiencies and operational deficiencies across acute care nursing units at one community hospital in Ohio.

Methods:

This study was conducted at 3 units of a community hospital. A mixed method study design comprised of two phases used in this study. Phase I conducted performance evaluation on National Database of Nursing Care Quality indicators (NDNQ) data from 3rd quarter of 2011 to 4th quarter of 2015 units by using the Data Envelopment Analysis (DEA) methodology. Input indicators included total nursing hours, turnover, while falls, pressure ulcer, CAUTI, pain, and patient Days were considered output indicators. Focus group interviews with 12 nurses and 3 managers were conducted at Phase II. The content analysis method was used to analyze the transcripts of the interviews.

Results:

An efficiency score for each nursing unit in each quarter was obtained by the DEA. Research results showed that the average efficiency score ranged from 0.90-0.95 (mean=.93) for 3 units and the Med-Surg/Ortho unit has the highest average efficiency score out of the three nursing units. In addition, results had benchmarked nursing care performance and identified patient care quality deficiencies and operational defines across 3 nursing units. It has fostered the development of unit-specific strategies to improve patient care quality and operational efficiency.

Conclusion:

The research framework and the DEA method are valuable for performance evaluation at health care setting. The results of this study are able to provide unit managers and nurses’ directions for improvement and sharing the best practices across healthcare organizations. Furthermore, the outcome of this research project is able to provide the best practices to other healthcare organizations.

Title:
Moving Patient Care Quality Forward by Benchmarking Nursing Care Performance

Keywords:
Benchmark Research, DEA method and Nursing Performance

References:


**Abstract Summary:**
The results of this study are able to provide unit managers and nurses’ directions for improvement and sharing the best practices across healthcare organizations. Also, the outcome of this research project is able to provide the best practices to other healthcare organizations.

**Content Outline:**

*Introduction*

1. Health care cost in the US
2. A need of benchmarking research
3. The Data Envelopment Analysis (DEA) method
4. The National Database of Nursing Quality Indicators (NDNQI)
5. Gap in Knowledge

*Purpose of study*

*Theoretical framework: Study framework - Inter-Professional Performance Evaluation Model*

*Methods*

1. **Settings:**
   1. 3 nursing research units from the targeted hospital
   2. 4 nurses and 1 manager from each research unit for the phase II study
2. **Designs:**
   1. A two-phase mixed method design was used in this study
   3. Phase II: Qualitative design- Focus group interviews
3. **Analysis:**
1. Phase I: DEA methods
2. Phase II: Content analysis

Results

1. Phase I: DEA results for 3 nursing units including efficient scores and Nursing Care Performances.
2. Phase II: results from 4 focus groups

Conclusion

1. Summary of study results
2. Implications for the future practice

First Primary Presenting Author

**Primary Presenting Author**

Huey-Shys Chen, PhD, RN, MCHES, FAAN
Widener University
School of Nursing
Professor/Dean
Chester PA
USA

**Professional Experience:** 7/13- Professor 9/12- 7/13 Associate Professor Chair, Department of Health Promotion, Outcomes, Systems, and Policy Director, Doctor of Nursing Practice Program College of Nursing, University of Toledo 7/09-8/12 Associate Professor, UMDNJ, School of Nursing, Newark, New Jersey 5/07-7/09 Assistant Professor, University of Medicine and Dentistry of New Jersey, School of Nursing, Newark, New Jersey 08/03-12/06 Assistant Professor, University of Central Florida, School of Nursing, Orlando, Florida.

**Author Summary:** Dr. Chen currently serves as associate Dean of Research and Scholarship at College of Nursing, University of Toledo. Her research focuses on instrument and psychometric development and community-based study, specifically on the smoking prevention among adolescents. Dr. Chen serves as a reviewer for national grant and also serves as reviewer for Nursing Research, Research in Nursing and Health, Journal of Nursing Scholarship, Journal of Transcultural Nursing and, Public Health Nursing among others.

Second Author

Yue Zhang, PhD
College of Business and Innovation, University of Toledo
Department of Information Operations & Technology Management
Assistant Professor
University of Toledo
Toledo OH
USA

**Professional Experience:** Dr. Yue Zhang is currently an Assistant Professor in Operations Management at the College of Business and Innovation in the University of Toledo. His research mainly focuses on healthcare operations management, health policy development, and process improvement, by developing and applying rigorous techniques in Operations Research and Statistics. His works have been appeared at several top-tier journals in Operations Management and Healthcare Management. Dr. Zhang is an expert in Linear Programming, which is the foundation of the DEA method.
**Author Summary:** Dr. Zhang is an associate professor and director of Ph.D. Program in Manufacturing and Technology Management, College of Business and Innovation at University of Toledo. He is an experienced research and one of his research expertise is performance evaluation by using the DEA method.