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# Demonstrating Nurse-Sensitive Outcomes: Do Barrier Perceptions Differ By Role?

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## Introduction

- 1855: Florence Nightingale conducts first nursing outcomes research in Scutari, Turkey
- 1966: Donabedian introduces structure, process, and outcome
- 1980s to present: evolution to outcome focus
- Evidence demonstrates barriers to change, use of research, EBP, and dissemination of research outcomes in public health
- No existing evidence on barriers to outcome demonstration
- Demonstration of healthcare intervention effectiveness required
- Magnet established standards for excellence and expectations for outcome demonstration
- Nurses must understand and demonstrate the value nursing practice adds to the business of health care

## Research Question

What are the differences in perception of barriers to comprehensively addressing demonstration of nursing practice outcomes related to Magnet designation requirements between Chief Nursing Officers, Magnet Program Directors, Nursing Leaders, and Direct Care Registered Nurses?

## Methods

- Survey instrument developed
  - Expert input from CNOs, MPDs, and DC RNs
- 3 parts: 7 Demographic questions
  - 21 Likert scale items
  - 1 open ended question on best practices
- Cronbach's α = 0.838: tool reasonably reliable and valid
- Design: Descriptive, cross-sectional survey
- Setting: 2012 national Magnet conference
- Sample: Administered to 526 Magnet conference attendees
  - n = 331 (62.9% return)
  - 12 (3.6%) to 16 (4.8%) missing responses per question
- Analysis: alpha = .05
  - SPSS and Minitab
  - Frequencies, Chi Square, ANOVA, post hoc Tukey HSD
- Limitations: Recent recognition of barriers to outcome demonstration, No existing reliable and valid survey tool, Convenience sample, Cross-sectional study design,

## Results

**Demographic Results**

| Characteristic | Response Category: n (%) | | | | | | |
|---|---|---|---|---|---|---|---|
| Your Current Position | CNO: 18 (5.4%) | MPD: 81 (24.5%) | Direct Care RN: 86 (26.0%) | Leader: 49 (14.8%) | Other: 93 (28.1%) | Missing: 4 (1.2%) | |
| Highest Nursing Education Level | | Assoc/Diploma: 27 (8.2%) | Bachelors: 133 (40.2%) | Masters: 146 (44.1%) | Doctoral: 19 (5.7%) | Missing: 9 (1.8%) | |
| Highest Non-Nursing | | | Bachelors: 68 (20.5%) | Masters: 45 (13.6%) | Doctoral: 8 (2.4%) | Missing: 210 (63.4%) | |
| Years of Nursing Experience | 0 - 9 yrs: 48 (14.5%) | 10 - 19 yrs: 72 (21.8%) | 20 - 29 yrs: 86 (26.0%) | 30 - 39 yrs: 96 (29.0%) | 40 - 50 yrs: 20 (6.0%) | Missing: 9 (2.7%) | |
| Hospital Magnet Status | | | Magnet: 178 (53.8%) | Not Magnet, Active journey: 115 (34.7%) | Not Magnet, Non-Journey: 21 (6.3%) | Missing: 9 (5.1%) | |
| Number of Beds in Your Hospital | 1 - 49: 5 (1.5%) | 50 - 99: 6 (2.7%) | 100 - 199: 46 (13.9%) | 200 - 299: 41 (12.4%) | 300 - 499: 103 (31.1%) | 500+: 105 (34.7%) | Non-hospital: 3 (0.3%) | Missing: 9 (2.7%) |
| Hospital Location | SE US: 40 (12.1%) | NE US: 47 (14.2%) | Midwest US: 95 (28.7%) | South US: 40 (12.1%) | SW US: 74 (22.4%) | NW US: 8 (2.4%) | Outside US: 15 (4.5%) | Missing: 12 (3.6%) |

Interpreting Significance:
* = p ≤ 0.05
** = p ≤ 0.001

| Chi Square Results By Category X2, df, significance |
|---|
| Resource Availability 40.711, 8, p=0.000** |
| Perceived Organizational Value 5.987, 8, p=0.649 |
| Benchmarks 4.084, 8, p=0.849 |
| Competing Priorities 21.938, 8, p=0.005** |
| Process Understanding 25.851, 8, p=0.001** |

| Likert Scale Mean Responses 1=strongly disagree, 2= disagree, 3=neutral, 4=agree, 5=strongly agree | Chief Nursing Officer | Magnet Program Director | Nurse Leader | Direct Care RN | Other | All | Sig |
|---|---|---|---|---|---|---|---|
| Resources (Q 1, 3, 4, 5, 8, 17) | | | | | | | |
| Q1: Our hospital has a coordinated system for managing quality data. | 2.556 | 2.383 | 2.714 | 2.860 | 2.581 | 2.624 | p=0.001 |
| Q3. It is easy to get quality indicator reports from the Electronic Health Record. | 1.500 | 1.444 | 1.612 | 1.942 | 1.548 | 1.633 | p=0.001 |
| Q4. Our hospital has dedicated support personnel to analyze, report, and articulate data. | 1.944 | 2.148 | 2.326 | 2.721 | 2.387 | 2.382 | p=0.000 |
| Q5. Our hospital has a culture of continuous quality improvement in place. | 2.833 | 2.864 | 2.878 | 2.930 | 2.774 | 2.856 | p=0.248 |
| Q8. Too many personnel hours are needed to meet Magnet quality indicator requirements. | 1.722 | 2.037 | 1.694 | 2.058 | 2.097 | 1.991 | p=0.031 |
| Q17. The cost required to comprehensively manage Magnet quality outcomes is too high. | 1.556 | 1.840 | 1.816 | 1.860 | 1.968 | 1.862 | p=0.314 |
| **RESOURCES TOTAL** | 2.018 | 2.119 | 2.174 | 2.395 | 2.226 | 2.225 | p=0.000 |
| Meaningful (Q 2, 10, 20) | | | | | | | |
| Q2. Magnet quality indicator data influences nursing practice changes in my hospital. | 2.722 | 2.691 | 2.735 | 2.826 | 2.634 | 2.719 | p=0.325 |
| Q10. Measuring Magnet quality indicators is valuable to our hospital. | 2.778 | 2.926 | 2.898 | 2.942 | 2.882 | 2.905 | p=0.402 |
| Q20. The only reason we track some indicators is to meet Magnet requirements. | 1.389 | 1.691 | 1.551 | 1.651 | 1.763 | 1.664 | p=0.389 |
| **MEANINGFUL TOTAL** | 2.279 | 2.434 | 2.382 | 2.463 | 2.416 | 2.420 | p=0.383 |
| Benchmarks (Q 11, 12 14, 19) | | | | | | | |
| Q11. Our practice area has benchmarks available. | 2.833 | 2.728 | 2.735 | 2.663 | 2.527 | 2.661 | p=0.190 |
| Q12. Benchmark databases provide meaningful feedback on quality indicators. | 2.889 | 2.716 | 2.837 | 2.872 | 2.806 | 2.810 | p=0.366 |
| Q14. Current Magnet indicators are not meaningful for quality care improvement. | 1.278 | 1.173 | 1.184 | 1.233 | 1.301 | 1.232 | p=0.594 |
| Q19. External vendors exist that provide unit-based indicator benchmarks needed for Magnet. | 2.278 | 2.358 | 2.082 | 2.151 | 2.108 | 2.186 | p=0.220 |
| **BENCHMARKS TOTAL** | 2.328 | 2.244 | 2.206 | 2.228 | 2.183 | 2.222 | p=0.539 |
| Priorities (Q 6, 13, 16) | | | | | | | |
| Q6. Multiple competing quality initiatives make it difficult to complete Magnet requirements. | 2.056 | 2.346 | 2.286 | 1.977 | 2.280 | 2.205 | p=0.036 |
| Q13. Increasing regulatory obligations limit our resources to measure outcomes. | 2.167 | 2.173 | 2.102 | 2.046 | 2.075 | 2.101 | p=0.885 |
| Q16. Daily operating priorities limit administrative participation in Magnet quality processes. | 2.167 | 2.370 | 2.163 | 2.186 | 2.237 | 2.242 | p=0.606 |
| **PRIORITIES TOTAL** | 2.134 | 2.300 | 2.201 | 2.078 | 2.209 | 2.192 | p=0.223 |
| Process Understanding (Q 7, 9, 15, 18, 21) | | | | | | | |
| Q7. Staff RNs plan projects that include use of meaningful "before" and "after" measures. | 2.222 | 1.790 | 2.000 | 2.477 | 1.903 | 2.058 | p=0.000 |
| Q9. Our hospital is able to create trend charts with axis labels, data labels, and data tables. | 2.611 | 2.790 | 2.796 | 2.779 | 2.871 | 2.801 | p=0.418 |
| Q15. Staff RNs understand why "before" and "after" quality outcome measurement is important. | 2.167 | 2.037 | 2.286 | 2.198 | 2.032 | 2.122 | p=0.351 |
| Q18. There is clear communication to RNs about required Magnet quality indicators. | 2.333 | 2.111 | 1.959 | 1.930 | 2.011 | 2.024 | p=0.378 |
| Q21. Our hospital consistently establishes defined outcome measures before initiating projects. | 2.278 | 1.802 | 2.265 | 2.477 | 2.194 | 2.186 | p=0.000 |
| **PROCESS TOTAL** | 2.322 | 2.106 | 2.260 | 2.371 | 2.201 | 2.238 | p=0.025 |

**Summary of best practice hospital processes to reduce barriers**

**Organizational**
- Engaged senior leadership
- Commitment as an organizational priority
- Communication is crucial: early, ongoing, and frequent
- Resources dedicated to collecting data and producing reports
- Unit level data displays
- Accountability process for displaying, discussing, and submitting trended, benchmarked results
- Differentiation between Magnet and other external quality reporting requirements and traditional performance improvement processes
- Frequent and repeated educational meetings to facilitate leader and staff process understanding

**Magnet Program Director**
- Relationship-building with nursing leaders and unit quality contacts
- Comprehensive understanding of hospital units, required indicators by unit, and benchmarking
- Facilitate fit between organizational and Magnet processes
- Establish timely processes for units to communicate required outcomes

**Summary of barrier perceptions by role**

CNO = Chief Nursing Officer
MPD = Magnet Program Director
NL = Nurse Leader
DC RN = Direct Care RN

| Perceive less of a barrier | Barrier | Perceive more of a barrier |
|---|---|---|
| DC RNs | Coordination of quality data management system | MPDs |
| DC RNs | Ease in obtaining needed EHR quality outcome reports | MPDs |
| CNOs | Presence of dedicated support personnel to analyze, report, and articulate outcome data | DC RNs |
| MPDs & DC RNs | Too many personnel hours are needed to meet Magnet quality indicator requirements | CNOs and NLs |
| CNOs & DC RNs | Multiple competing priorities make it difficult to complete Magnet outcome requirements | MPDs |
| DC RNs, CNOs, & NLs | Direct Care RNs plan projects with meaningful before and after measures | MPDs |
| DC RNs, CNOs, & NLs | Hospital establishes defined outcome measures before initiating projects | MPDs |

## Conclusions/ Implications

Study provides some of the first evidence to demonstrate existence of barriers and differences in barrier perception related to role.

**Barriers Identified:**
- Identifying and allocating needed resources to support outcome reporting
- Ensuring understanding of, and accountability for, outcome demonstration at all levels of the organization
- Optimizing MPD role and knowledge to facilitate relationship-building and communication specific to Magnet Recognition Program® requirements

**Implications for Practice:**
- Design of MPD roles to ensure integration of Magnet process knowledge into hospital data collection and reporting
- Opportunity for MPDs to ensure CNO and direct care RN enculturation of Magnet outcome reporting requirements
- Design data collection and reporting methodologies/templates to optimize increasingly challenged nursing resources

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* Additional references available upon request

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