SB08-188
Pilot Program Implementation Study

THE RELATIONSHIP BETWEEN NURSE INVOLVEMENT AND OUTCOMES
Background

- Governor's Nurse Workforce and Patient Care Task Force Recommendation in 2007
- Funded by Legislation produced by Senator Betty Boyd in 2008
- Pilot Program Implementation Committee appointed
  - Broad based representation from statewide stakeholders
- Legislation funded initiate study steps
  - Research consultant selected
- Design, implementation, results: 18 months
Purpose of the Study

- Generate knowledge about what nurses think about their current level of involvement in decisions about patient care, the work environment, and planning for staffing.
- Associations between perceptions of involvement and organizational outcomes
### Clinical Autonomy:
Involvement in Decisions about Nursing Practice

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<th>Implementation</th>
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### Work Autonomy:
Involvement in Decisions about Work Methods

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### Control over Clinical Practice:
Involvement in Decisions about Work Environment

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#### OUTCOMES

- Feedback
- Staff Nurses Make Decisions Independently
  - Patient Care
  - Work Methods
  - Work Environment
- Staff Nurses and Leadership Share Decision-Making
- Leadership Solicits Input and Makes Decision
- Leadership Makes Decision

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**Legend:**
- Identification
- Development
- Selection
- Implementation
Built and tested 11 item specific survey

- Involved in planning for staffing
- Formal structures for involvement / functionality (2)
- Informal structures for involvement / functionality (2)
- Organization is supportive of nurse involvement
- Nurse are held accountable for decisions / efficacy (2)
- Nurses are involved in outcomes evaluation
- Formal and informal feedback systems (2)
• Instruments possessed strong psychometric properties
  - Houser/Graham-Dickerson alpha = .896
  - Intent to leave alpha = .907
  - Satisfaction alpha = .828
Quantitative Phase

- Quantitative data collection ended May 31st
- Ten of 15 randomly selected hospitals participated
- IRB approval received from all ten / Regis waiver
- All data collected via internet based data repository
  - Onsite data collection also offered
- N=54 usable units of data
Variables of Interest

- **Nurse level:**
  - Involvement
  - Intent to Leave
  - Satisfaction

- **Unit Level**
  - Turnover
  - Patient satisfaction
  - Patient Complaints
  - Infections (3)
  - Adverse events (3)

- **Descriptive Statistics:**
  - Frequency analysis
  - Correlation analysis
  - Chi square analysis
Final Phase Analytic Methods

- Data inspection
- Creation of summary scores
  - Unit involvement scores (means)
  - Sum of 11 specific items
  - Grouping variables (+/-1SD from median cutoff)
- Imputation / normalization
- Descriptives
  - Correlation of continuous measures
- Multivariate analysis of variance (MANOVA)
  - Differences in outcomes between “involvement” groups
Patient care autonomy

Mean = 35.65
Std. Dev. = 3.926
N = 200

Range: 21-40
Unit operations and work methods

Range: 11-30

Mean = 20.92
Std. Dev. = 3.884
N = 203
Unit governance - actual

Range: 6-54

Mean = 10.8
Std. Dev. = 5.532
N = 188
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Correlations

- Involvement and Overall Satisfaction: \( \rho = 0.667 \) (moderately strong)
- Involvement and intent to leave: \( \rho = -0.495 \) (moderate)

All correlations: \( p < 0.001 \)
Correlations

- Planning for staffing inversely correlated with infections (\(\text{rho} = .541\)) and satisfaction with nursing care (\(\text{rho} = .956\))
- Involvement correlated with patients’ satisfaction with nursing care (\(\text{rho} = .635 - .914\))
- A reduction in infections is correlated with involvement (\(\text{rho} = .415 - .691\))
- Informal structures are more important for nurse satisfaction (\(\text{rho} = .443 - .616\))
Associations

- **Formal Involvement / Intent to Leave**
  - Chi square = 33.645, p < .001

- **Informal Involvement / Intent to Leave**
  - Chi square = 28.498, p < .001

- *Functionality of involvement was not significantly associated with satisfaction or intent to leave*
Associations

- Organizational support for staff nurse involvement / thinking of quitting
  - Chi square 22.456, p=.008
- Formal and informal feedback was not significantly associated with outcomes
- Accountability and efficacy were not associated with outcomes
Overall involvement and outcomes

Summary Score Groups
MANOVA
p</.05
Thinking of quitting
CLABSI
Pressure ulcers

Those patient care units with high overall involvement had fewer nurses thinking of quitting, had a lower rate of catheter associated blood infections, and had lower pressure ulcer rates.
## Inferential Results

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<tr>
<th>Planning for staffing</th>
<th>raw turnover</th>
<th>overall pt sat</th>
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<tbody>
<tr>
<td>Formal structures</td>
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<td>Informal structures</td>
<td>CAUTI</td>
<td>thinking of quitting</td>
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<tr>
<td>Formal structures are functional</td>
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<tr>
<td>Informal structures are functional</td>
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<tr>
<td>Organizational support for involvement</td>
<td>Pressure ulcers</td>
<td>Patient complaints</td>
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<tr>
<td>Nurses are held accountable</td>
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</tr>
<tr>
<td>Nurses are accountable for efficacy</td>
<td>Pressure ulcers</td>
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<tr>
<td>Involved in outcomes evaluation</td>
<td>Pressure ulcers</td>
<td>CLABSI</td>
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Summary of Inferential Findings

- **Planning for staffing**
  - Differences in turnover / patient satisfaction with nursing

- **Formal structures and functions**
  - Not a factor

- **Informal structures and functions**
  - Differences in nurse satisfaction indicators
  - Differences in infection rates

- **Outcomes evaluation involvement**
  - Differences in pressure ulcers, some infections
Implications

- Involving nurses in decisions that affect them is associated with a more satisfied, stable workforce.
- Systems do not have to be highly structured or formalized; informal systems may be as effective.
- Involving nurses in assessing the outcomes of their decisions is associated with improved outcomes.
- Critical is the perception that the nurses' opinion is solicited, valued, and used in decision making.
Acknowledgements

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