

# SBo8-188 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



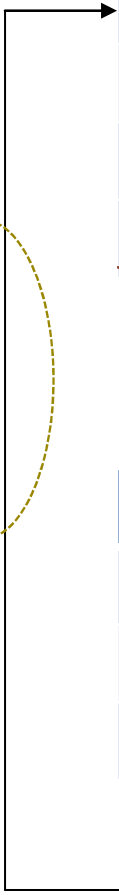
- Generate knowledge about what nurses think about their current level of involvement in decisions about patient care, the work environment, and planning for staffing.
- Associations between perceptions of involvement and organizational outcomes

Clinical Autonomy: Involvement in Decisions about Nursing Practice	Work Autonomy: Involvement in Decisions about Work Methods	Control over Clinical Practice: Involvement in Decisions about Work Environment
Identification	Identification	Identification
Development	Development	Development
Selection	Selection	Selection
Implementation	Implementation	Implementation

<b>Staff Nurses Make Decisions Independently</b>	<b>Patient Care</b>
Staff Nurses and Leadership Share Decision-Making	<b>Work Methods</b>
Leadership Solicits Input and Makes Decision	<b>Work Environment</b>
Leadership Makes Decision	

**OUTCOMES**

Feedback



# 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)

# Instrumentation



- 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 31<sup>st</sup>
- 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

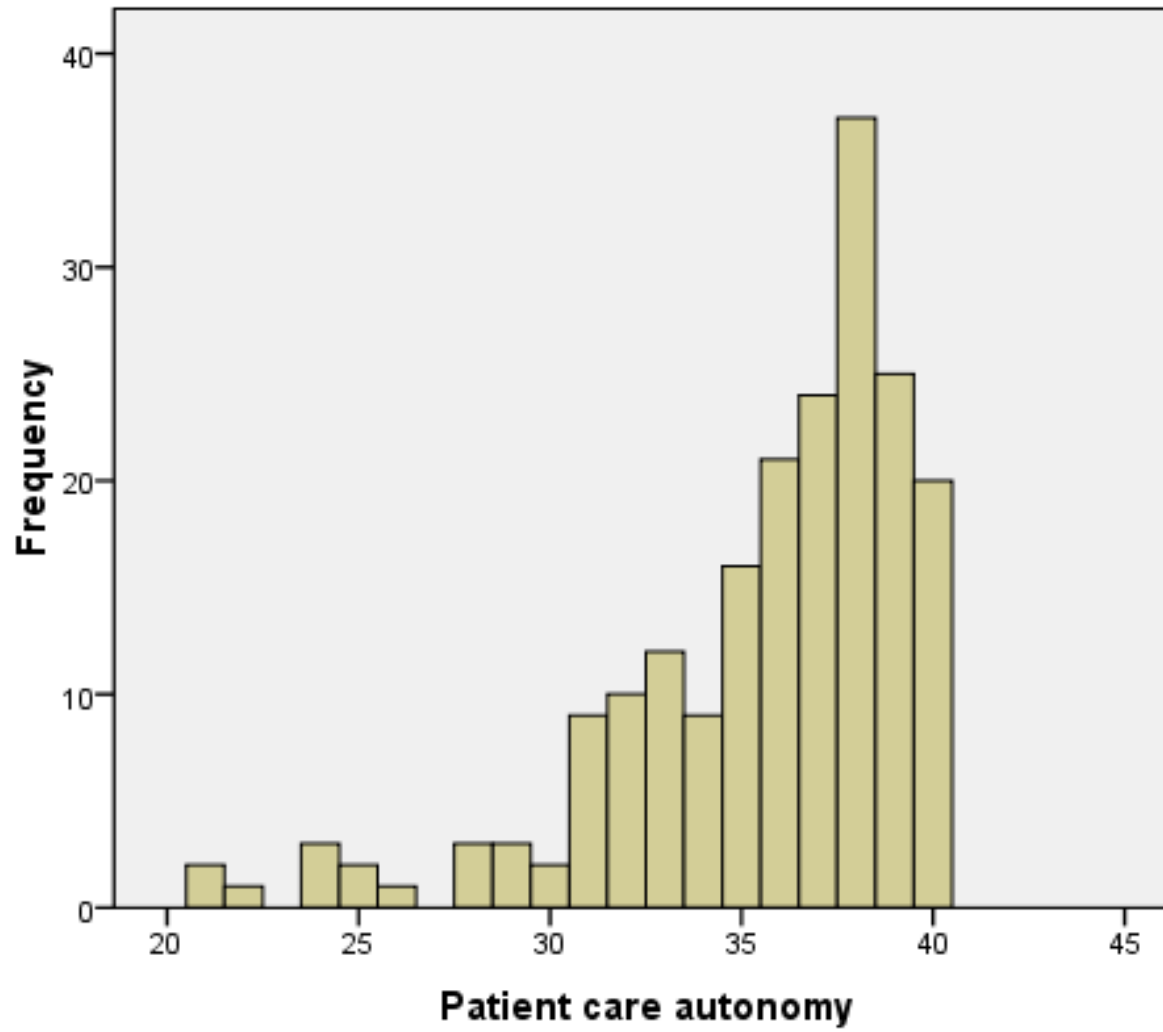


# Final Phase Analytic Methods



- 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

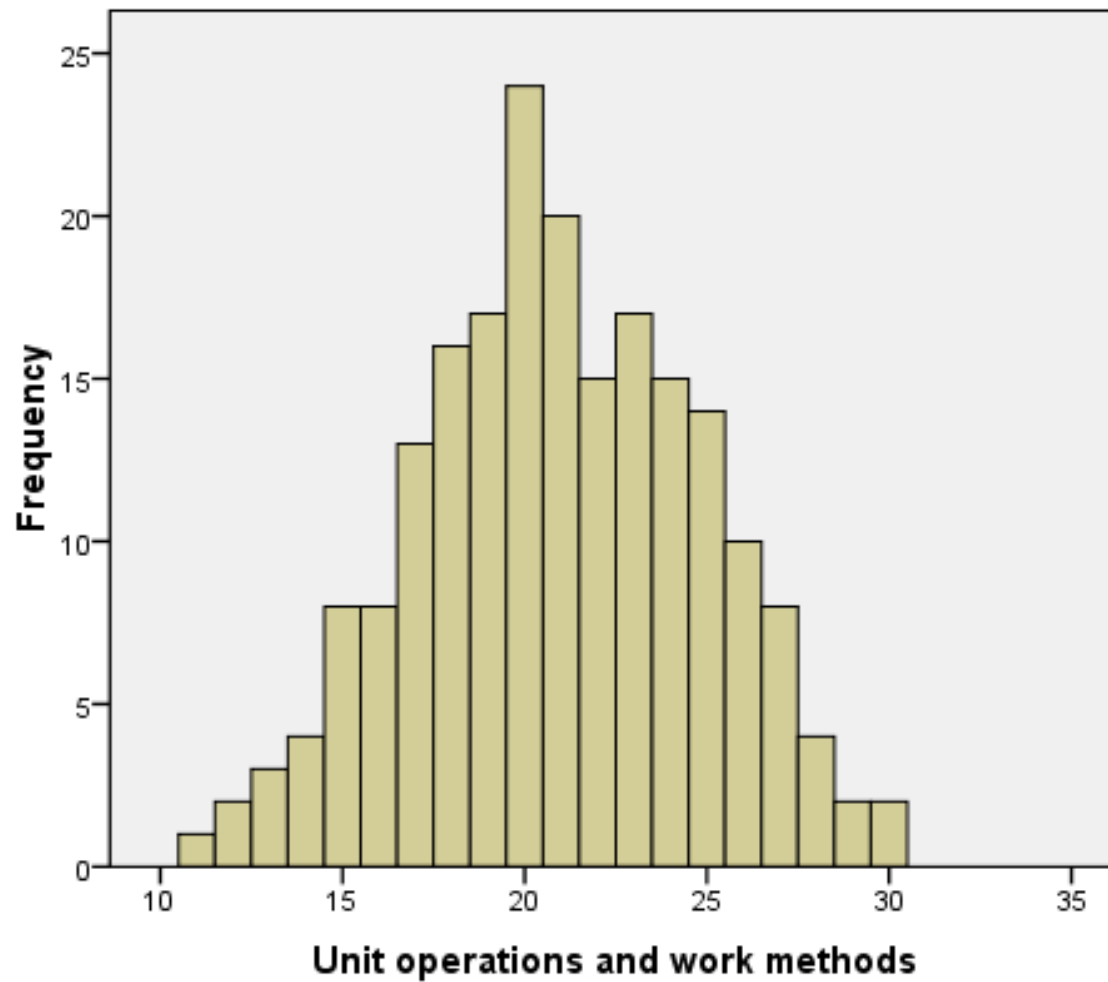
### Patient care autonomy



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

Range: 21-40

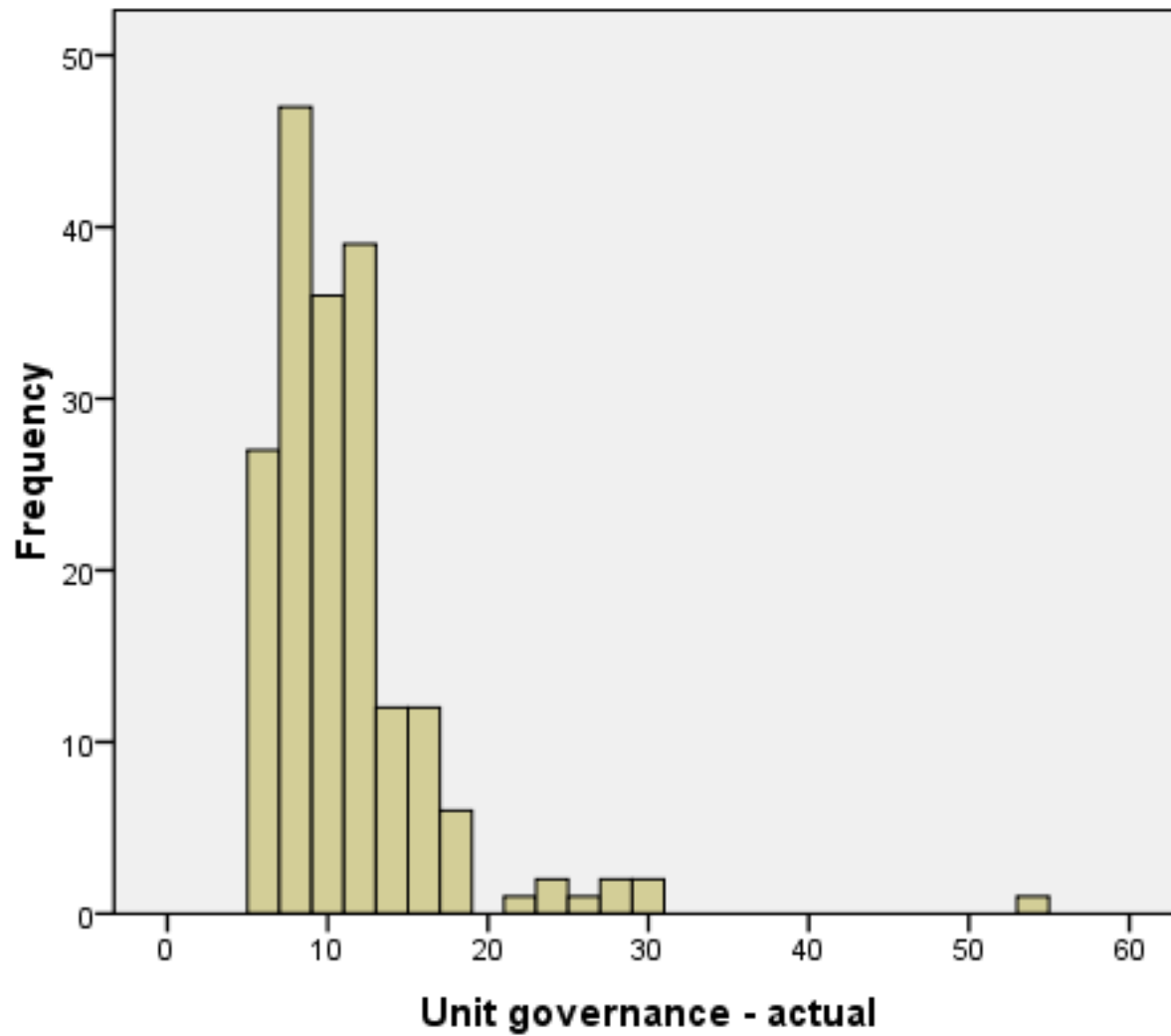
### Unit operations and work methods



Mean =20.92  
Std. Dev. =3.884  
N =203

Range: 11-30

### Unit governance - actual



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

Range: 6-54

<b>Clinical Autonomy: Involvement in Decisions about Nursing Practice</b>	<b>Work Autonomy: Involvement in Decisions about Work Methods</b>	<b>Control over Clinical Practice: Involvement in Decisions about Work Environment</b>
Identification	Identification	Identification
Development	Development	Development
Selection	Selection	Selection
Implementation	Implementation	Implementation

# Correlations



- Involvement and Overall Satisfaction:  $\rho = .667$   
(moderately strong)
- Involvement and intent to leave:  $\rho = -.495$   
(moderate)

All correlations:  $p < .001$

# Correlations



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

# 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



<b>Summary Score Groups</b> <b>MANOVA</b>
$p \leq .05$
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



	MANOVA, $p \leq .05$		
Planning for staffing	raw turnover	overall pt sat	
Formal structures			
Informal structures	CAUTI	thinking of quitting	actively looking
Formal structures are functional			
Informal structures are functional		thinking of quitting	actively looking
Organizational support for involvement	Pressure ulcers	Patient complaints	CLABSI
Nurses are held accountable			
Nurses are accountable for efficacy	Pressure ulcers		
Involved in outcomes evaluation	Pressure ulcers	CLABSI	
Formal feedback systems			
Informal feedback systems			

# 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 structure 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



**THIS STUDY WAS FUNDED BY SB 88-188,  
SPONSORED BY SENATOR BETTY BOYD  
THE COLORADO TRUST  
ALPHA KAPPA CHAPTER OF SIGMA THETA  
TAU INTERNATIONAL**

**GRATITUDE TO DR. JOYCE VERRAN,  
EXTERNAL REVIEWER AND CONSULTANT**