

# Interprofessional Communication: An Intervention for Relational Coordination in Novice Clinicians

JAN PHILLIPS, DNP, RN, CENP

DIRECTOR, NURSING ACUTE CARE, ED AND CARE COORDINATION

PENN STATE HEALTH: THE MILTON S. HERSHEY MEDICAL CENTER

ADVISOR: JOHN HUDSON, PHD, RN

OLD DOMINION UNIVERSITY

OCTOBER 5, 2016

# Purpose

- ▶ To improve relational coordination scores in novice interprofessional clinical teams through team-based collaborative training.





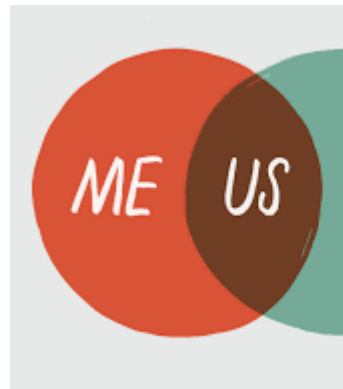
# Background

- ▶ Nurses and physicians are typically educated in silos
- ▶ Opportunities for team-based interprofessional collaborative learning are challenging
- ▶ An estimated 70 to 80 percent of healthcare errors are attributed to poor team communication and collaboration



# Background

- ▶ Improving patient care quality and the practice environment are directly related to communication and relationships among clinicians.
- ▶ Nurses and physicians have different understandings of the definition of working together to achieve quality patient outcome .
  - ▶ MDs: hierarchical view of issuing orders and expecting nurses to carry them out without question
  - ▶ RNs: relationship should be collegial and on more equal ground





# Why do Relationships Matter?

- ▶ Meaningful connections
- ▶ Across functional and organizational boundaries
- ▶ Coordination on the fly



# Dimensions of Relational Coordination

Communicating and relating for the purpose of task integration

- ▶ **shared goals**

- ▶ goals that transcend the individual
- ▶ what are we trying to accomplish

***What we know  
together***

- ▶ **shared knowledge**

- ▶ role identification and understanding
- ▶ how is our work connected

***How we  
feel***

- ▶ **mutual respect**

- ▶ over comes status barriers to understand all perspectives
- ▶ How does our work contribute value

- ▶ **communication**

- ▶ frequent, timely, accurate
- ▶ problem-solving rather than blaming.

***How we  
behave***

**It's all about  
relationship**



# Relational Coordination matters most when.....

- ▶ Interdependent tasks
- ▶ Uncertainty
- ▶ Time constraints



# Evidence-Based Research Questions

- ▶ RQ1: Is there an improvement in RC in first year physician residents and first year novice nurses following an interprofessional communication training program over a five month period of time?
- ▶ RQ2: In professional discipline comparisons will there be a difference in RC in the physician group compared to the nurse group following the intervention?
- ▶ RQ3: In discipline specialty group comparisons will there be a difference in RC in surgical teams (RNs and MDs) compared to medicine teams (RNs and MDs) following the intervention?



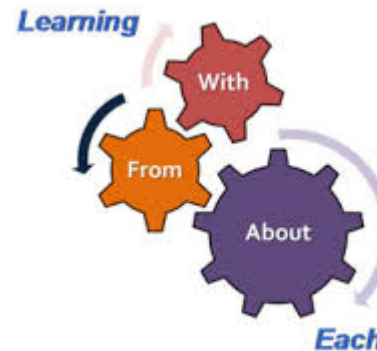
# Study Setting

- ▶ Penn State Health: The Milton S. Hershey Medical Center (Hershey, PA)
- ▶ 548 bed Quaternary Academic Medical Center
- ▶ Level 1 Trauma Center (Adults and Pediatrics)
- ▶ ~10,000 employees
  - ▶ 2500 RNs
  - ▶ 1100 MDs and APCs
  - ▶ 565 physician residents and fellows



# Study Sample

- ▶ 14 surgical physician residents, 22 medical physician residents
  - ▶ matched for post-graduate residency education
- ▶ 7 graduate nurses on surgery units, 10 graduate nurses on medicine units
  - ▶ accepted positions on surgical and medicine patient care units
- ▶ 38 of the 53 participants met criteria for analysis
- ▶ 72 percent participation rate in the study





# Study Sample

Demographics	Study Group (N=38)	
	N	Percent
<b>Profession</b>		
-Physician	22	57.9%
-Nurse	16	42.1%
<b>Discipline specialty</b>		
-Surgery	21	55.3%
-Medicine	17	44.7%
<b>Gender</b>		
-Male	18	47.4%
-Female	20	52.6%

# Study Tool: Relational Coordination Survey for Patient Care

- ▶ Seven item survey designed for the health care environment
- ▶ Five item Likert-type scale
- ▶ Respondents report on behaviors of others rather than on their own behaviors
  - ▶ Decreases socially desirable responses
- ▶ Survey measures level of relational coordination within identified work groups and between work groups
- ▶ Reliable and Validated
  - ▶ Internal Chronbach's Alpha was 0.806

# Study Procedure

- ▶ Study was part of continuing graduate medical education for physician residents
- ▶ Adjunct education for graduate nurses (GNs)
- ▶ Voluntary verbal consent
- ▶ Participation in the pre-intervention survey implied study participation
- ▶ Post-intervention survey administered one month following the completion of the final education session



# Design & Analysis

## Study Design

- ▶ Pre-experimental one group pretest-posttest design
  - ▶ One interprofessional group of novice clinicians (physicians and nurses)
  - ▶ All clinicians received the same educational intervention

## Data Analysis

- ▶ Inferential Statistics
  - ▶ Paired t-test
  - ▶ Wilcoxin SR
  - ▶ Mann Whitney U
- ▶ Descriptive Statistics
  - ▶ Sums, Percent, Mean/Median

# Intervention

- ▶ Five (2 hr.) multi-faceted educational sessions on team-based communication competencies
  - ▶ Active listening for meaning
  - ▶ Soliciting another's perspective
  - ▶ Negotiating a transparent plan
  - ▶ Non-verbal communication
  - ▶ Speaking-up
- ▶ Interprofessional faculty
  - ▶ RN, APRN, MD, SW, Administrator, Theater Professor

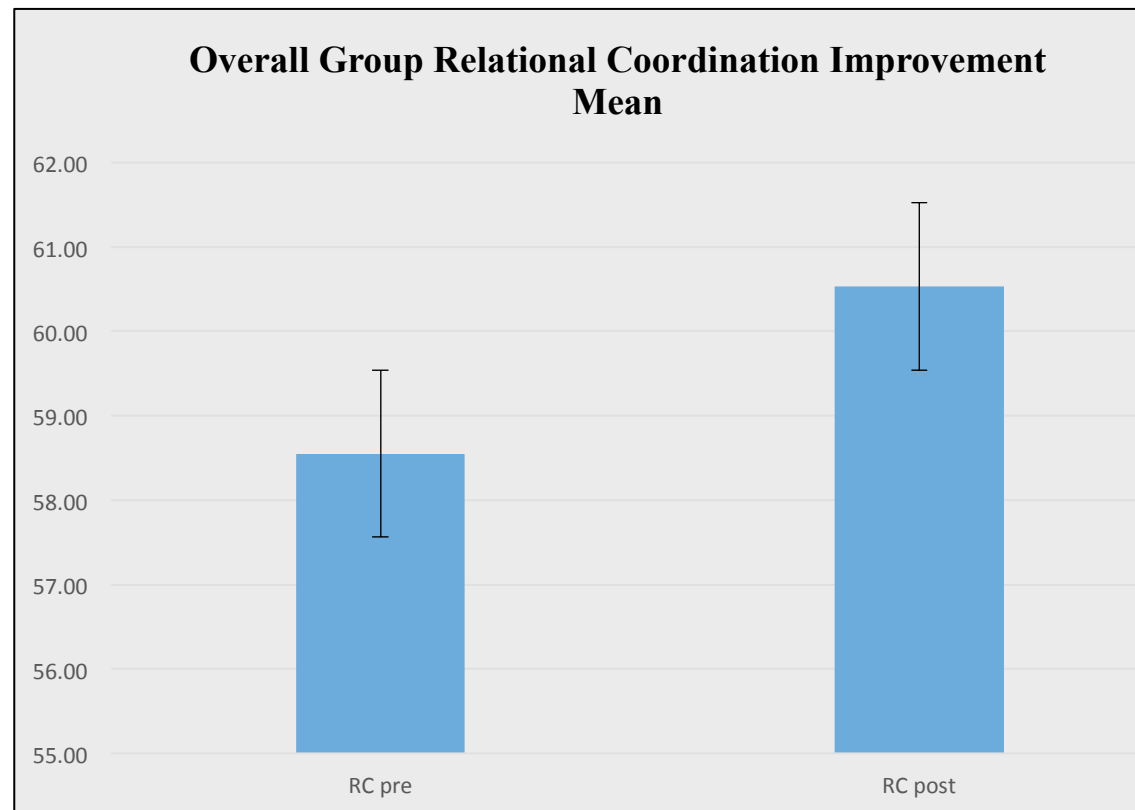


# Data Analysis: RQ 1

Will RC score improve in novice clinicians?

**Comparison Group Statistics**

Overall Group	RC pre	RC post
Mean	58.55	60.53
Median	60	62
Std. Deviation	5.23	4.32
Range	22	20
N	38	38
Unpaired t-test	t= -2.811	
	p= .008	





# Data Analysis: RQ 2

Will there be a difference between MDs and RNs?

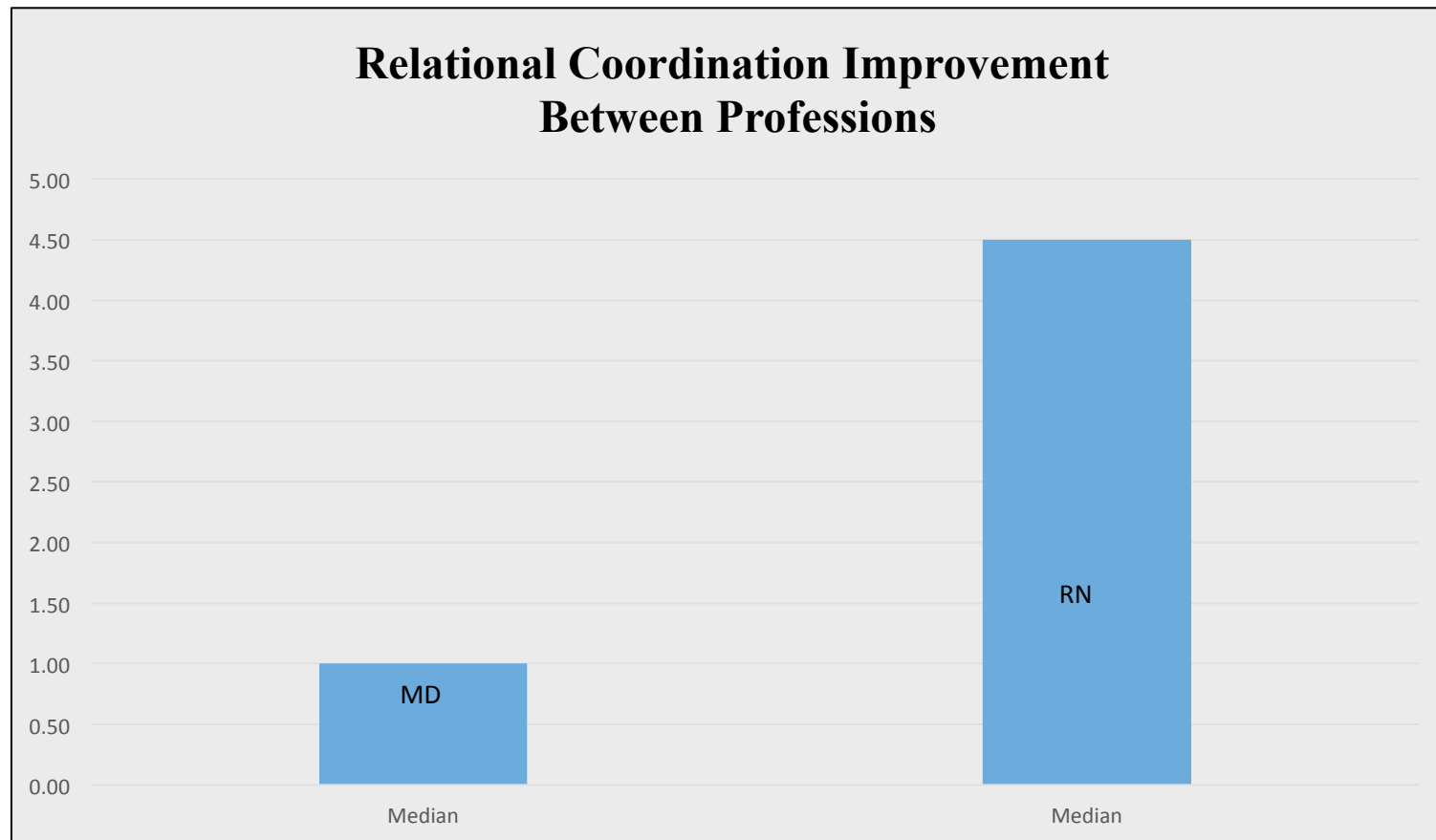
**Comparison Within Professions**

Profession		RC pre	RC post
MD	Mean	59.94	60.70
	Median	60.00	62.00
	Std. Deviation	4.67	4.55
	Range	21.00	20.00
	N	22	22
	Wilcoxin S R	0.523	
		p= .05	
RN	Mean	56.59	60.69
	Median	56.00	61.5
	Std. Deviation	5.06	4.3
	Range	17.00	15
	N	16	16
	Wilcoxin S R	0.003	
		p= .05	

**Comparison Between Professions**

Profession		
MD	Mean	0.41
	Median	1.00
	Std. Deviation	3.61
	Range	13.00
	N	22
	Mann Whitney U	0.008 p=.05
RN	Mean	4.13
	Median	4.50
	Std. Deviation	4.41
	Range	19.00
	N	16.00

# Professional Group Difference Graph



# Data Analysis: RQ 3

Will there be a difference between surgery and medicine teams?

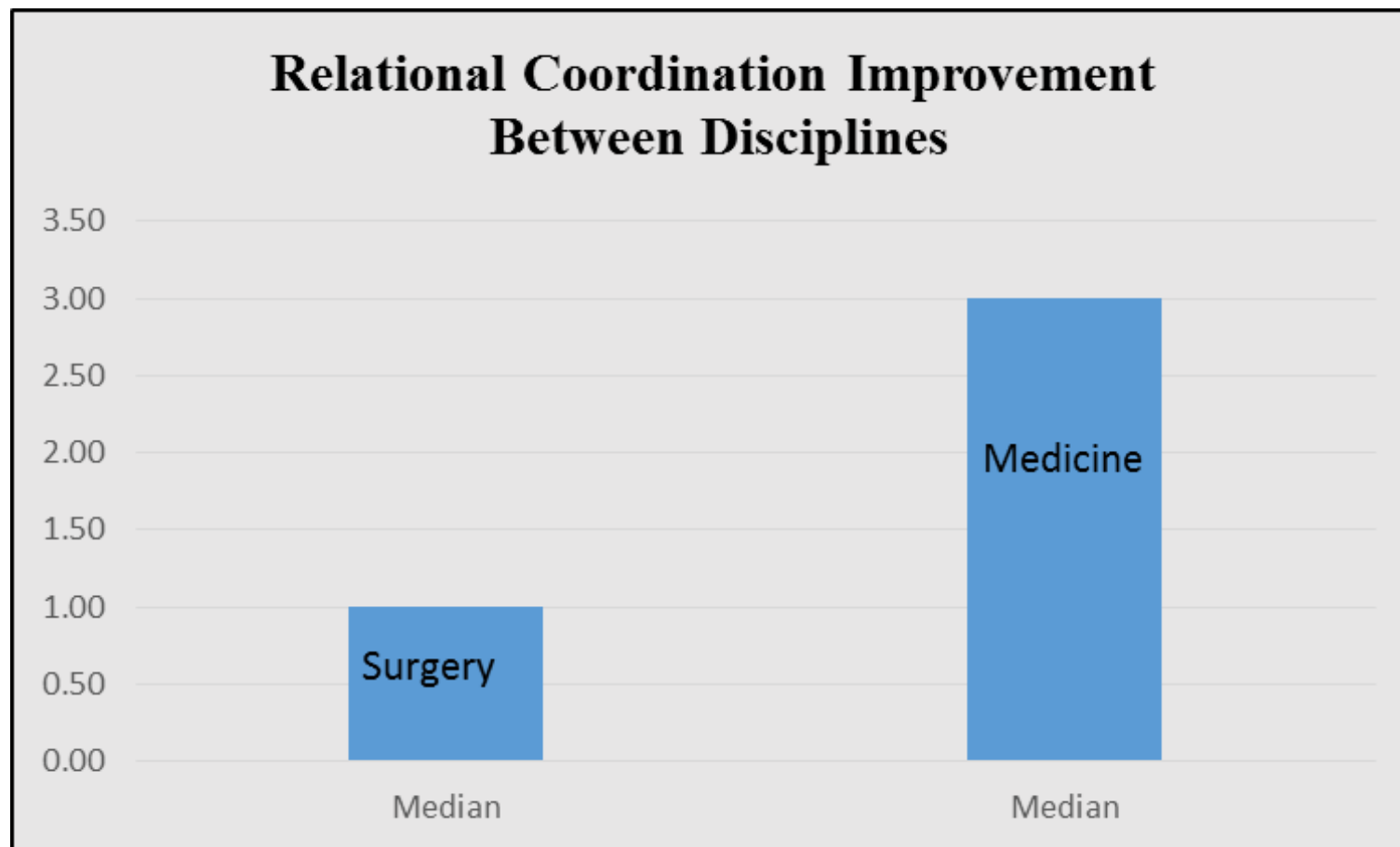
## Comparison Within Disciplines

Discipline		RC pre	RC post
Surgery	Mean	58.95	59.95
	Median	60.00	62.00
	Std. Deviation	5.58	5.11
	Range	21.00	20.00
	N	21	21
	Wilcoxin S R	0.301	
		p= .05	
Medicine	Mean	58.64	61.56
	Median	60.00	61.50
	Std. Deviation	4.66	3.29
	Range	21.00	13
	N	17	17
	Wilcoxin S R	0.005	
		p= .05	

## Comparison Between Disciplines

Discipline		
Surgery	Mean	1.00
	Median	1.00
	Std. Deviation	4.43
	Range	15.00
	N	21
	Mann Whitney U	0.161 p=.05
Medicine	Mean	3.18
	Median	3.00
	Std. Deviation	4.00
	Range	17.00
	N	17

# Professional Discipline Difference Graph





# Conclusions

- ▶ Addressed gap of specific education competencies to improve relational coordination in novice clinicians
- ▶ Evidence to support an interprofessional communication intervention taught in a team-based collaborative setting can affect RC
- ▶ Competencies of: Active Listening for Meaning; Soliciting Another's Perspective; Negotiating a Transparent Plan; Nonverbal Communication; and Speaking Up positively improved RC scores

# Limitations

- ▶ Small sample size
- ▶ Generalizability
- ▶ Scheduling constraints
- ▶ Physician buy-in

# Implications for Practice

- ▶ One caregiver or one profession alone is not able to support the complex needs of patients in the current healthcare delivery system
- ▶ Team-based collaborative care is emerging as necessary
  - ▶ decrease fragmented patient care
  - ▶ improve patient outcomes
  - ▶ improve efficiency
  - ▶ decrease cost
- ▶ DNP prepared nurse leaders disrupt traditional practices by providing broader perspective and using innovative ideas to positively affect outcomes



# Implications for Research

- ▶ Same study with more members of the healthcare team
- ▶ Use the RC survey as a tool to identify specific areas within the dimensions of relational coordination to focus improvements for defined teams of clinicians or identified inpatient units
- ▶ Expanding interprofessional education both in the academic setting of students and in the patient care environment of experienced clinicians provides many research opportunities to affect a healthy work environment





# Implications for Leadership & Teamwork

- ▶ Role of the DNP is to interpret problems at patient and system levels to determine how nursing intervention partners with the interprofessional team to achieve desired outcomes
- ▶ Expected that DNP graduates are able to effectively communicate and collaborate with interprofessional peers to develop and implement new models of care
  - ▶ Improved RC and communication supports teamwork
- ▶ Redesigning the delivery of healthcare to improve patient care quality



# Implications for Business

- ▶ Interprofessional collaboration has been associated with decreased inpatient lengths of stay and reduced mortality
- ▶ Healthcare is changing, and central to redesigning healthcare delivery is developing and deploying patient-centered collaborative care
- ▶ Evidence demonstrating the importance of soft skills development leading to improved patient care and reduced cost



# Implications for Policy

- ▶ Nurses should be full partners with physicians in redesigning healthcare
- ▶ Nurse leaders develop and support an environment where nurses are encouraged to speak up
- ▶ Involvement in professional organizations provides nurses with a unified voice when issues are discussed and changes are proposed affecting how nursing is practiced and care is delivered





# Implications for Technology

- ▶ Research on the use of technologies such as Skype or Face Time for clinician communication
- ▶ Role of the DNP prepared nurse to participate in the analysis and selection of new technologies designed to improve communication and patient care outcomes





# Significance

- ▶ Culture of teamwork central to becoming a learning organization and safeguarding care required to achieve better outcomes for patients
- ▶ Shifts authority gradient away from physician focused care to team-based collaborative care
  - ▶ concrete training for novice clinicians
- ▶ Intervention identified to impact relational coordination
- ▶ Relational coordination improves performance in settings with high levels of uncertainty, interdependence, and time constraints by improving information exchange between care providers



“Individual talents get magnified many times over through the collective lens of an effective team.”

*Dalal Haldeman*

