NURSE STAFFING, WORKLOAD, AND THE DIALYSIS WORK ENVIRONMENT:

DOES IT MATTER??

CHARLOTTE THOMAS-HAWKINS, PHD, RN, RUTGERS SCHOOL OF NURSING
LINDA FLYNN, PHD, RN, FAAN, UNIVERSITY OF COLORADO COLLEGE OF NURSING

PRESENTATION TOPICS:

- **Overview of Evidence on Nurse Staffing, Missed Care, Work Environment, and Patient Outcomes in Diverse Care Settings**
  - Linda Flynn
- **Translation of Evidence to Dialysis Settings**
  - Charlotte Thomas-Hawkins
  - Linda Flynn
- **The Hard Evidence: Impact of Work Environment, Nurse Staffing, Transition Safety, and Patient Outcomes in Chronic Dialysis Settings**
  - Charlotte Thomas Hawkins
- **Policy Implications / Conclusions**
  - Charlotte Thomas-Hawkins
  - Linda Flynn

IT'S ALL ABOUT THE EVIDENCE!

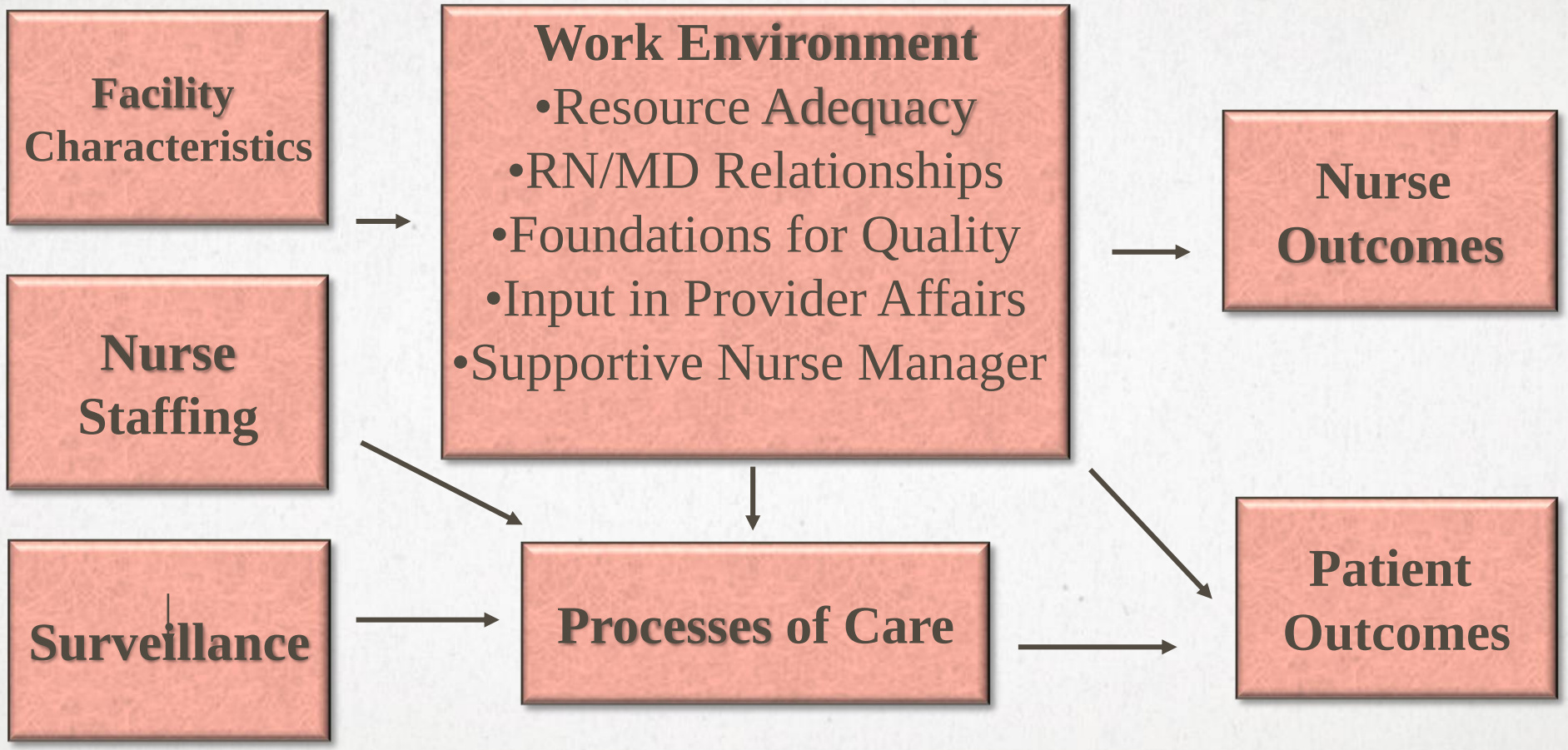
KNOW & USE THE EVIDENCE!!

ONE STUDY DOES NOT A BODY OF EVIDENCE MAKE!

RN STAFFING IN HOSPITALS:

DOES IT MATTER?

THE NURSING ORGANIZATION & OUTCOMES MODEL



(Aiken, et al., 1998; 2002)

“HOSPITAL NURSE STAFFING AND PATIENT MORTALITY, NURSE BURNOUT, AND JOB DISSATISFACTION”

AIKEN, CLARKE , SLOANE, SOCHALSKI, & SILBER (2002)

JAMA, 288(16)

METHODS

- Inspired by California Staffing Legislation
- 168 Pennsylvania Hospitals
- 10,184 RNs (surveyed on # of assigned patients last shift, etc.)
- 232,342 surgical patients (general, orthopedic, and vascular)

FINDINGS:

Each 1 additional patient per nurse associated with:

- **7% increase** in likelihood of 30 day inpatient mortality (OR = 1.07, p < .001)
- **23%** increase in likelihood of nurse burnout (OR = 1.23, p = <.001)
- Ratio of 6 pts/RN compared to 4 pts per RN = **14% increase in patient mortality**
- Ratio of 8 pts / RN compared to 4 pts per RN = **31% increase in patient mortality**

“IMPLICATIONS OF THE CALIFORNIA NURSE STAFFING MANDATE FOR OTHER STATES”

AIKEN, SLOANE, CIMIOTTI, CLARKE, FLYNN, SEGO, SPETZ, AND SMITH (2010)

***HEALTH SERVICES RESEARCH, 45(4),* 904-921**

STUDY FUNDED BY:

- NINR Grant # R01NR04513 to Dr. Aiken
- RWJF Grant # 053071 to Dr. Flynn
- California mandated ratios went into effect in 2004: 1st State to implement ratios in hospitals
- Study represents a "Natural Experiment": Pre and Post Legislation Data

METHODS

- Nurse Survey Data (2006): 22,336 RNs in 604 hospitals
  - California: 9,257 RNs in 353 hospitals (353 of 357)
  - New Jersey: 5,818 RNs in 73 hospitals
  - Pennsylvania 7,261 RNs in 178 hospitals
- American Hospital Association Data: hospital characteristics
- Surgical Mortality: Examined among 1,100,532 patients in 444 larger hospitals (State Health Department Data)

AVERAGE PATIENT-TO-RN RATIO BY STATE (2006)

Specialty	CA Mandate	CA	NJ	PA
All Staff RNS		4.1**	5.4	5.4
Med-Surg	5:1	4.8**	6.8 pa	6.5
Peds	4:1	3.6**	4.6	4.4
ICU	2:1	2.1**	2.5 pa	2.3
Telemetry	5:1	4.5**	5.9 pa	5.7
Oncology	5:1	4.6**	6.3pa	5.7
Psych	6:1	5.7**	7.0	7.9 NJ
L& D	3:1	2.4*	2.6	2.8 CA

PERCENT OF NURSES WITH PATIENT RATIOS AT OR BELOW CALIFORNIA BENCHMARKS (2006)

Specialty	CA Mandate	CA	NJ	PA
Med-Surg	5:1	88%[NJ PA]	19%[PA]	33%
Peds	4:1	85%[NJ PA]	52%	66%
ICU	2:1	85%[NJ PA]	63%[PA]	71%
Telemetry	5:1	93%[NJ PA]	35% [PA]	52%
Oncology	5:1	90%[NJ PA]	29%[PA]	55%
Psych	6:1	81%[NJ PA]	56%[PA]	42%
L& D	3:1	94%[NJ PA]	88%	89%

CALIFORNIA: NURSE-REPORTED UNINTENDED CONSEQUENCES OF LEGISLATION (N = 9,257)

	Increased	Decreased or Remained Same	Increased or Remained Same
Patients per RN	10%	91%; 42% Decrease	
Use of Agency RNs	**43%**	57%	
RNs floating to other units	30%	**70%**	
Use of LPNs	15%	**85%**	
Use of Unlicensed Personnel		34% Decreased	**66%**
Support Service Staff	7%	27% Decreased	**73%**

HIGHER PT-RN RATIOS & NURSE-REPORTED EVENTS (N = 22,336 RNS)

- Higher reported Patient / Family Complaints
- Higher reported Verbal Abuse by Patients
- Higher reported Verbal Abuse by Staff
- Higher Burnout Scores
- Higher reported Job Dissatisfaction
- Higher Missing Changes in Patients Condition
- Higher reported Poor to Fair Quality

IF THE AVERAGE PT-RN RATIOS IN NEW JERSEY WERE EQUAL TO THE AVERAGE RATIOS IN CALIFORNIA, THERE WOULD BE:

13.9% FEWER SURGICAL DEATHS IN NEW JERSEY

10.6% FEWER DEATHS IN PENNSYLVANIA

“NURSING SKILL MIX IN EUROPEAN HOSPITALS: CROSS-SECTIONAL STUDY OF THE ASSOCIATION WITH MORTALITY, PATIENT RATINGS, AND QUALITY OF CARE”

AIKEN, SLOANE, ET AL. (2016)

BRITISH MEDICAL JOURNAL

HTTP://QUALITYSAFETY.BMJ.COM/CONTENT/QHC/EARLY/2016/11/03/BMJQS-2016-005567.FULL.PDF

DOES RN SKILL MIX MATTER?

- 6 European Countries: England, Ireland, Belgium, Switzerland, Spain
- 188 Hospitals
- 13,077 RNs
- 18,828 Patients

- Baseline average = 66% RN Skill Mix (6 patients-to 1 RN); lower RN Skill Mix associated with higher likelihood of inpatient mortality
- 10% reduction in RN Skill Mix (56% RNs) results in **12% increase on odds of inpatient mortality**
- 16.7% reduction in RN Skill Mix (50% RNs) results in **21% increase on odds on inpatient mortality**

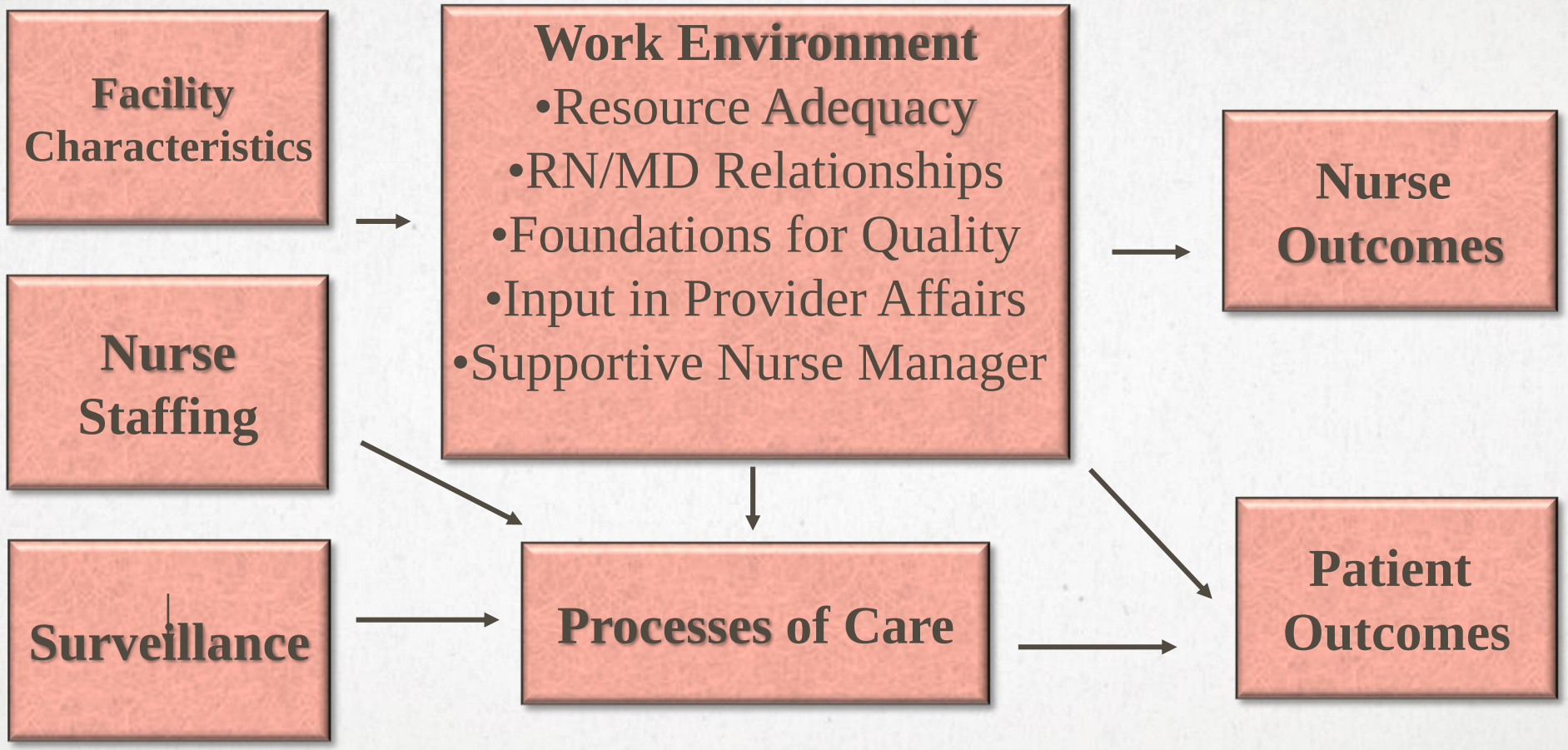
RN STAFFING AND MISSED CARE

- 4 or less patients compared to 10 patients reduces odds on missed care by 85% (Ball, et al., 2016)
- Preliminary findings in nursing homes (2017)
- Growing body of evidence that missed care results in poor patient outcomes including re-admission (Nelson & Flynn, 2015; Brooks-Carthon, et al., 2015; Brooks-Carthon, et al., 2016)

A SUPPORTIVE WORK ENVIRONMENT:

DOES IT MATTER?

THE NURSING ORGANIZATION & OUTCOMES MODEL



(Aiken, et al., 1998; 2002)

A GROWING BODY OF EVIDENCE IN HOSPITALS!

- Likelihood of 30-day **patient mortality 14% lower** in hospitals with supportive nursing work environments, controlling for related factors (Aiken, Clarke, Sloane, Lake, & Cheney, 2008)
  - 168 PA hospitals; 232,342 patients; 10,184 RNs

- Patients in hospitals with poor nursing work environments had **16% lower likelihood of surviving an In-Hospital Cardiac Arrest** (McHugh, et al., 2016).
  - 75 hospitals in 4 states; 11,160 patients; 100,000 RNs

- Hospitals with supportive nursing work environments had **significantly lower inpatient mortality (4.8% vs 5.8%)** for **similar 30-day cost** ($27,131 vs $27,292); controlling for geographic payment adjustment, supportive work environment hospitals had significantly lower costs per patient (Silber, et al., 2016).
  - 328 hospitals in 4 states; 88,634 patients.

“NURSES’ PRACTICE ENVIRONMENTS, ERROR INTERCEPTION PRACTICES, AND INPATIENT MEDICATION ERRORS”

FLYNN, LIANG, DICKSON, & SUH (2012)

JOURNAL OF NURSING SCHOLARSHIP, *44(2), 180-186*

METHODS

- 14 Hospitals
- 82 Medical/Surgical Units
- 686 Staff RNs / 96% response rate

EFFECTS OF PRACTICE ENVIRONMENT ON NURSES' INTERCEPTION PRACTICES (HLM)

Variable	β	SE	df	t	p
Work Environment (PES) Composite Score	**1.25**	**.37**	**64.00**	**3.41**	**.001**
PES Subscales					
Foundations for Quality	1.56	.41	74.01	3.82	.000
RN/MD Relationships	1.33	.31	78.47	4.41	.000
Nurse Participation	1.03	.33	53.22	3.10	.003
Supportive Manager	0.64	.29	66.60	2.20	.032
Staffing and Resources	0.58	.32	77.10	1.82	.073

EFFECT OF NURSES' INTERCEPTION PRACTICES ON MED ERROR RATES (HLM)

Variable	β	SE	df	t	p
Nurses' Interception Practices	-0.19	.08	73.98	-2.48	**-.015**

BUT WHO CARES?

DOES IT HURT THE BOTTOM LINE?

"INCIDENCE AND TREATMENT COSTS ATTRIBUTABLE TO MEDICATION ERRORS IN HOSPITALIZED PATIENTS"

CHOI, LEE, FLYNN, KIM, LEE, KIM, & SUH (2016)

***RESEARCH IN SOCIAL & ADMINISTRATIVE PHARMACY, 12*, 428-437**

57,554 PATIENTS FROM 2 HOSPITALS

COST PER MEDICATION ERROR = $8,439

BUT WHAT ABOUT NON-ACUTE SETTINGS?

DOES THE WORK ENVIRONMENT MATTER IN NURSING HOMES?

“EFFECTS OF NURSING PRACTICE ENVIRONMENTS ON QUALITY OUTCOMES IN NURSING HOMES”

FLYNN, LIANG, DICKSON, & AIKEN (2010)

JOURNAL OF THE AMERICAN GERIATRIC SOCIETY (JAGS) 58(12), 2401-2406

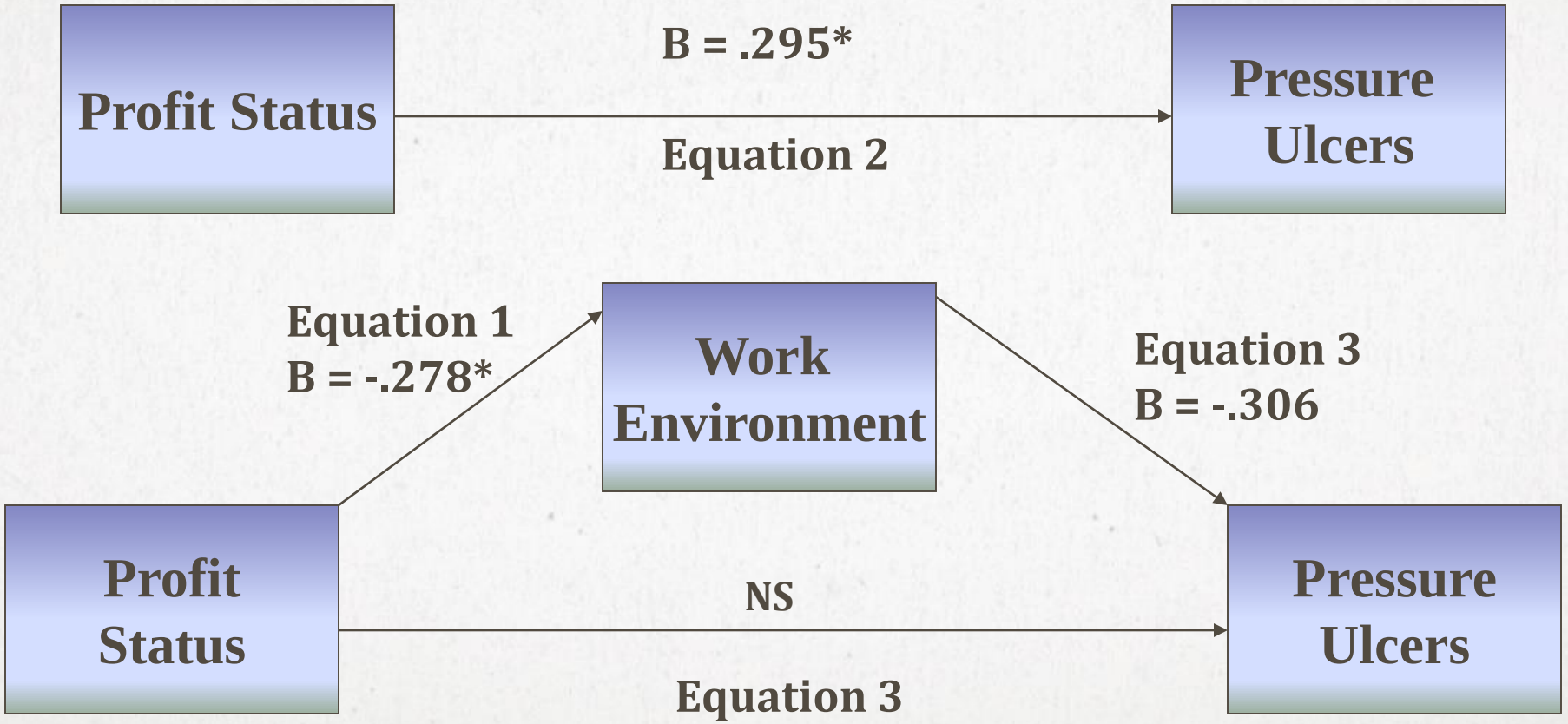
METHODS

- NH sample: 63 New Jersey NHs (19%)
- RN sample = 340
- Average of 6 Staff RN respondents per nursing home
- OLS Regression / Mediation Testing

EFFECTS OF WORK ENVIRONMENT ON PREVALENCE OF PRESSURE ULCERS

Predictor	Beta	Variance Explained
Quality Foundations	-.37**	13%
Resources	-.35**	12%
Nurse Participation	-.31*	10%
RN/MD Relations	-.28*	8%
TOTAL PES	**-.37****	**14%**

DOES PROFIT STATUS MATTER?



EFFECTS OF WORK ENVIRONMENT ON TOTAL # OF DEFICIENCIES

Predictor	Beta	Variance Explained
Adequate Resources	-.43***	18.6%
Nurse Participation	-.38**	14.3%
Manager Ability	-.37**	13.7%
Quality Foundations	-.36**	12.8%
RN/MD Relations	-.32*	10.2%
TOTAL PES	**-.44*** **	**19.7%**

DOES THE WORK ENVIRONMENT MATTER IN MEDICARE-CERTIFIED (SKILLED) HOME HEALTH?

“HOME HEALTH AGENCY WORK ENVIRONMENTS AND HOSPITALIZATIONS”

JARRIN, FLYNN, LAKE, & AIKEN (2014)

***MEDICAL CARE, 52(10)*, 877-883**

118 HOME HEALTH AGENCIES IN 3 STATES; CMS OUTCOME DATA; 1436 RNS

EFFECTS OF WORK ENVIRONMENT SUBSCALES ON RISKS-ADJUSTED OUTCOMES

Variables	Acute Hospitalizations		Community Discharge	
Subscale	β	P	β	P
Supportive Manager	-2.17	0.001	2.66	0.000
Resource Adequacy	-1.17	0.030	1.78	0.030
Foundations for Quality	-1.83	0.003	2.74	0.000
Participation	-1.36	0.019	1.97	0.003
Nurse-MD Relations	-0.38	NS	0.32	NS
TOTAL PES	-2.09	.002	2.83	.000

HOW WOULD YOU DESCRIBE A SUPPORTIVE WORK ENVIRONMENT IN

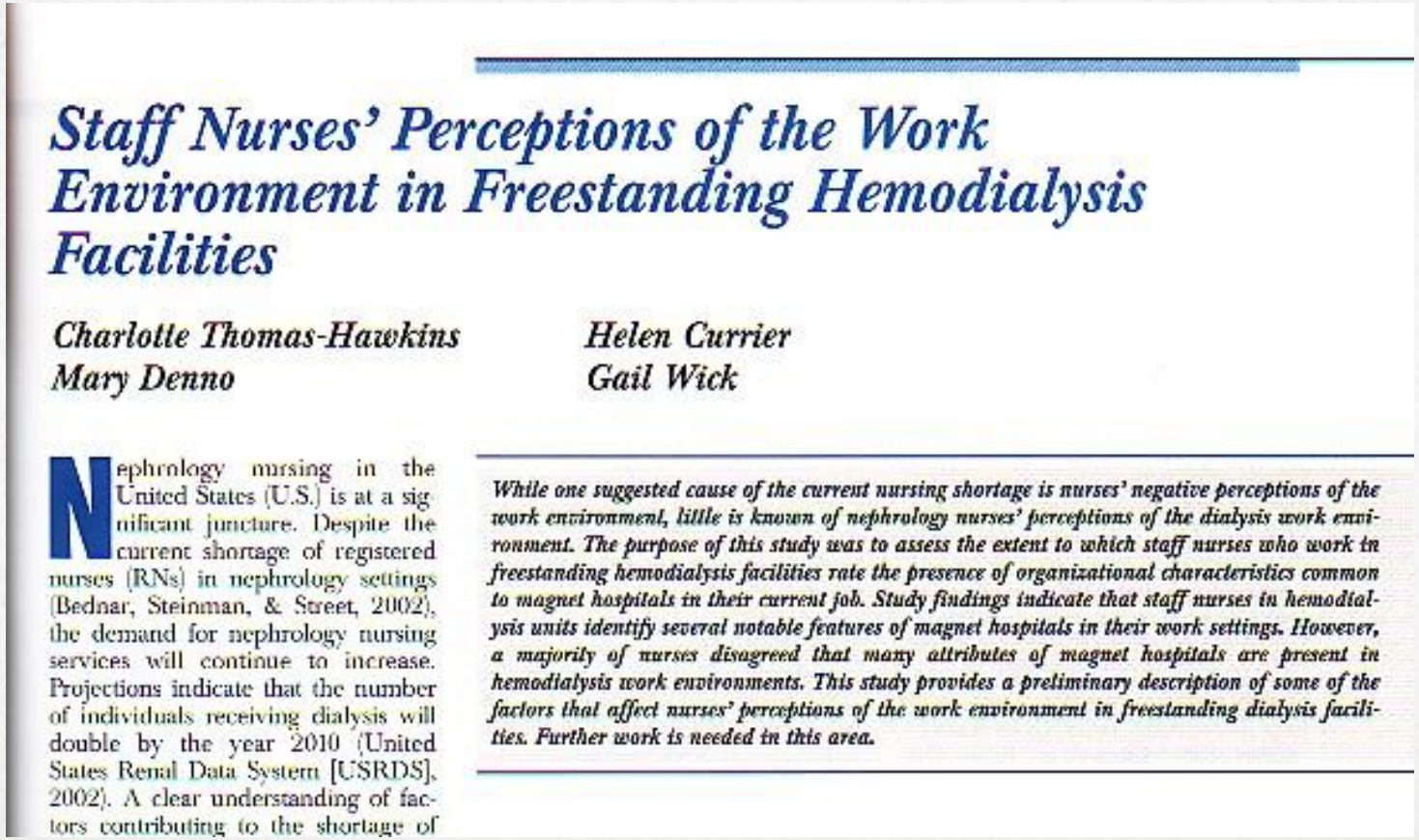
A DIALYSIS / NEPHROLOGY SETTING?

DIALYSIS WORK ENVIRONMENT

DOES IT MATTER?

Thomas-Hawkins, Denno, Currier, & Wick (2003)

NEPHROLOGY NURSING JOURNAL, 30(2), 169-178



Staff Nurses' Perceptions of the Work Environment in Freestanding Hemodialysis Facilities

Charlotte Thomas-Hawkins
Mary Denno
Helen Currier
Gail Wick

Nephrology nursing in the United States (U.S.) is at a significant juncture. Despite the current shortage of registered nurses (RNs) in nephrology settings (Bednar, Steinman, & Street, 2002), the demand for nephrology nursing services will continue to increase. Projections indicate that the number of individuals receiving dialysis will double by the year 2010 (United States Renal Data System [USRDS], 2002). A clear understanding of factors contributing to the shortage of

While one suggested cause of the current nursing shortage is nurses' negative perceptions of the work environment, little is known of nephrology nurses' perceptions of the dialysis work environment. The purpose of this study was to assess the extent to which staff nurses who work in freestanding hemodialysis facilities rate the presence of organizational characteristics common to magnet hospitals in their current job. Study findings indicate that staff nurses in hemodialysis units identify several notable features of magnet hospitals in their work settings. However, a majority of nurses disagreed that many attributes of magnet hospitals are present in hemodialysis work environments. This study provides a preliminary description of some of the factors that affect nurses' perceptions of the work environment in freestanding dialysis facilities. Further work is needed in this area.

SAMPLE

- 395 RN members of ANNA currently employed in chronic dialysis units

  - 74% For-Profit
  - 19% Not For-Profit
  - 6% Unsure of ownership type

PRACTICE ENVIRONMENT SCALE (PES-NWI)

LAKE, 2002

1 *Nurse Participation in Dialysis Provider Affairs*

- Reflect participatory role and valued status of nursing within organization

2 *Nursing Foundations for Quality of Care*

- Emphasizes high standard of care nursing care

3 *Nurse Manager Ability, Leadership, and Support*

- Focuses on critical role of nurse manager

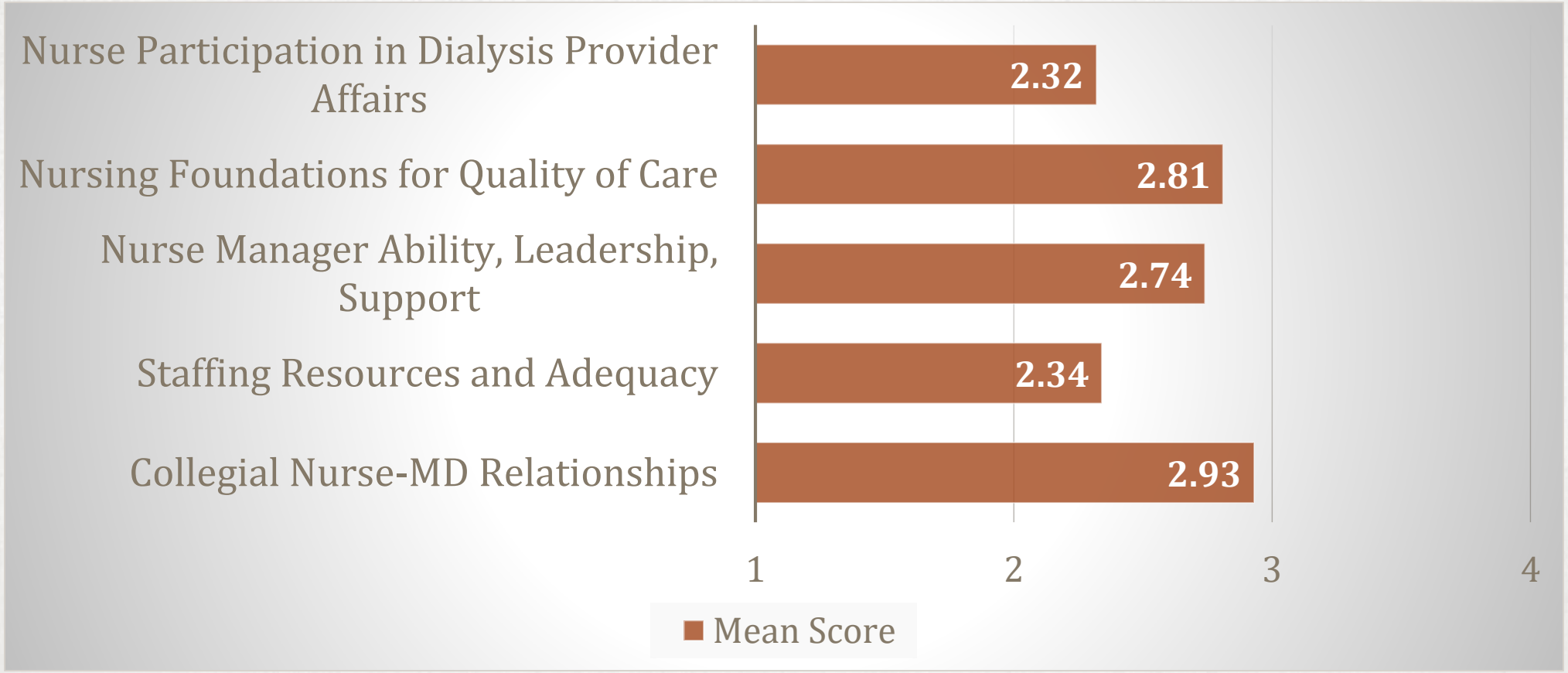
4 *Staffing and Resource Adequacy*

- Adequate staff and resources to provide quality care

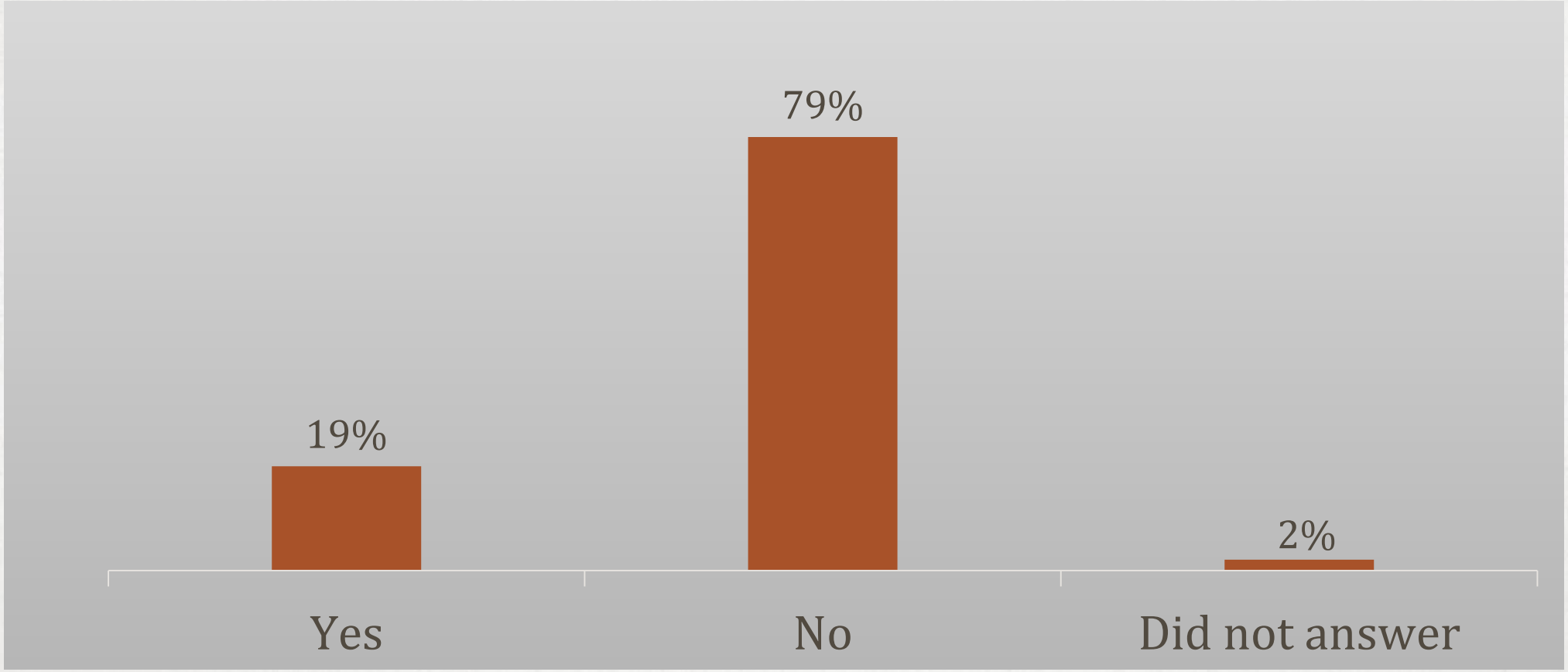
5 *Nurse-Physician Relationships*

- Positive working relationships

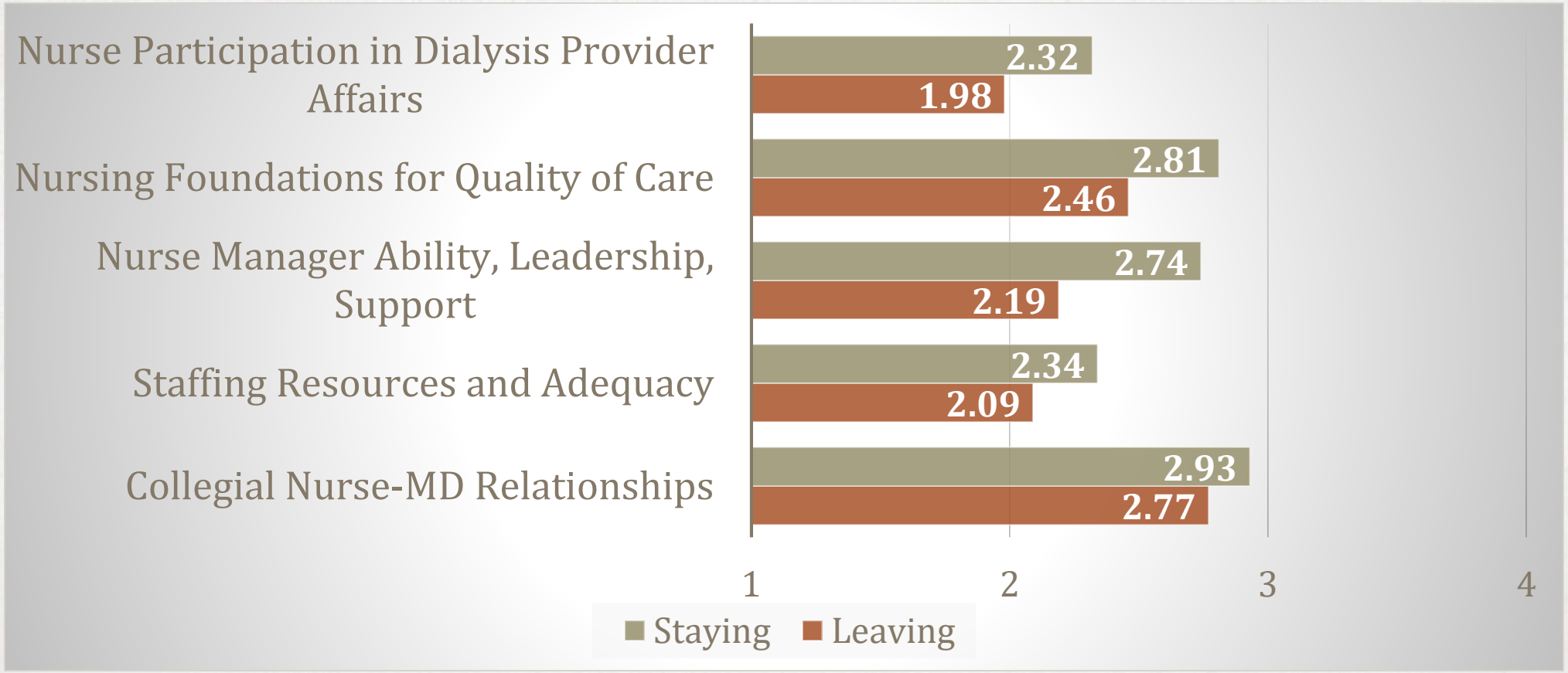
STAFF NURSES' RATINGS OF DIALYSIS WORK ENVIRONMENT SUPPORT (n = 395)



DO YOU PLAN TO LEAVE YOUR JOB IN THE NEXT YEAR? (n = 395)



DIFFERENCES IN RN RATINGS OF WORK ENVIRONMENT SUPPORT BY LEAVING vs. STAYING ON JOB (n = 395)



DOES DIALYSIS WORK ENVIRONMENT SUPPORT MATTER?

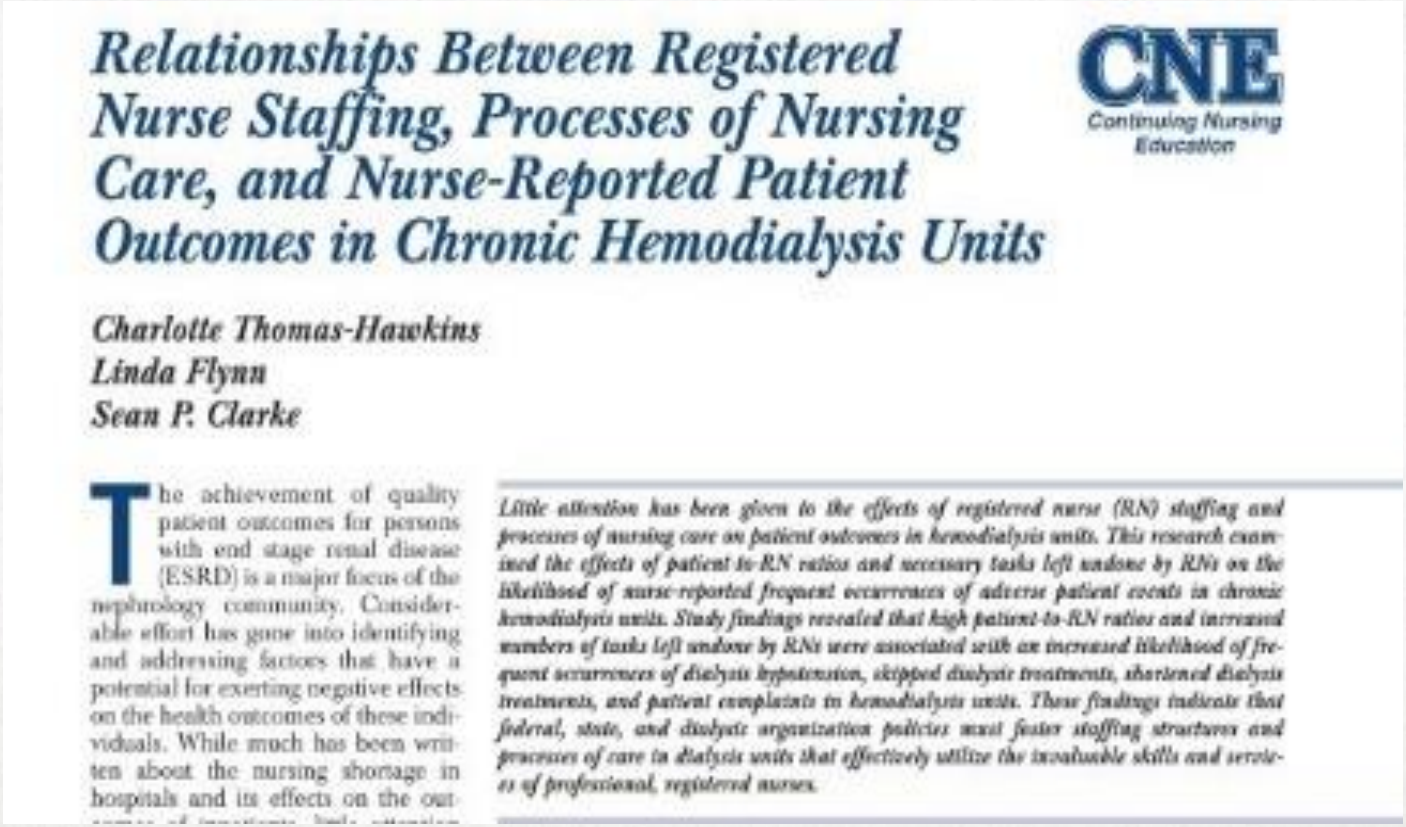
- This seminal study suggests that dialysis work environments that have characteristics supportive of professional nursing practice are important to nurses and matters for nurse retention in dialysis units.

RN STAFFING AND MISSED NURSING CARE IN DIALYSIS UNITS

DOES IT MATTER?

Thomas-Hawkins, Flynn, & Clarke (2008)

Nephrology Nursing Journal 35(2), 123-130



Relationships Between Registered Nurse Staffing, Processes of Nursing Care, and Nurse-Reported Patient Outcomes in Chronic Hemodialysis Units

CNE Continuing Nursing Education

Charlotte Thomas-Hawkins
Linda Flynn
Sean P. Clarke

The achievement of quality patient outcomes for persons with end stage renal disease (ESRD) is a major focus of the nephrology community. Considerable effort has gone into identifying and addressing factors that have a potential for exerting negative effects on the health outcomes of these individuals. While much has been written about the nursing shortage in hospitals and its effects on the out-

Little attention has been given to the effects of registered nurse (RN) staffing and processes of nursing care on patient outcomes in hemodialysis units. This research examined the effects of patient-to-RN ratios and necessary tasks left undone by RNs on the likelihood of nurse-reported frequent occurrences of adverse patient events in chronic hemodialysis units. Study findings revealed that high patient-to-RN ratios and increased numbers of tasks left undone by RNs were associated with an increased likelihood of frequent occurrences of dialysis hypotension, skipped dialysis treatments, shortened dialysis treatments, and patient complaints in hemodialysis units. These findings indicate that federal, state, and dialysis organization policies must foster staffing structures and processes of care in dialysis units that effectively utilize the invaluable skills and services of professional, registered nurses.

Funded by the American Nephrology Nurses' Association

STUDY PURPOSE

- Determine the relationship between RN staffing and missed nursing care in HD units
- Determine the impact of RN staffing on the odds of nurse reports of frequent adverse patient events in HD units
- Determine the impact of missed nursing care on the odds nurse reports of frequent adverse patient events in HD units

SAMPLE

- 422 RN members of ANNA currently employed in chronic dialysis units
  - 53.3% Corporate Free-Standing
  - 26.8% Hospital-owned, Hospital-based
  - 19.9% Hospital-owned, Free-standing

MEASURES

- Nurse staffing (Aiken, Clarke, Sloane, 2002)
  - Patient-to-nurse ratios
  - Calculated by dividing total number of patients on HD shift by total number of staff RNs

- Missed nursing care (Aiken et al., 2001; Sochalski, 2001)
  - Necessary tasks left undone
  - Total number of tasks left undone on last shift worked
  - 7 items
  - Total score = 0 to 7

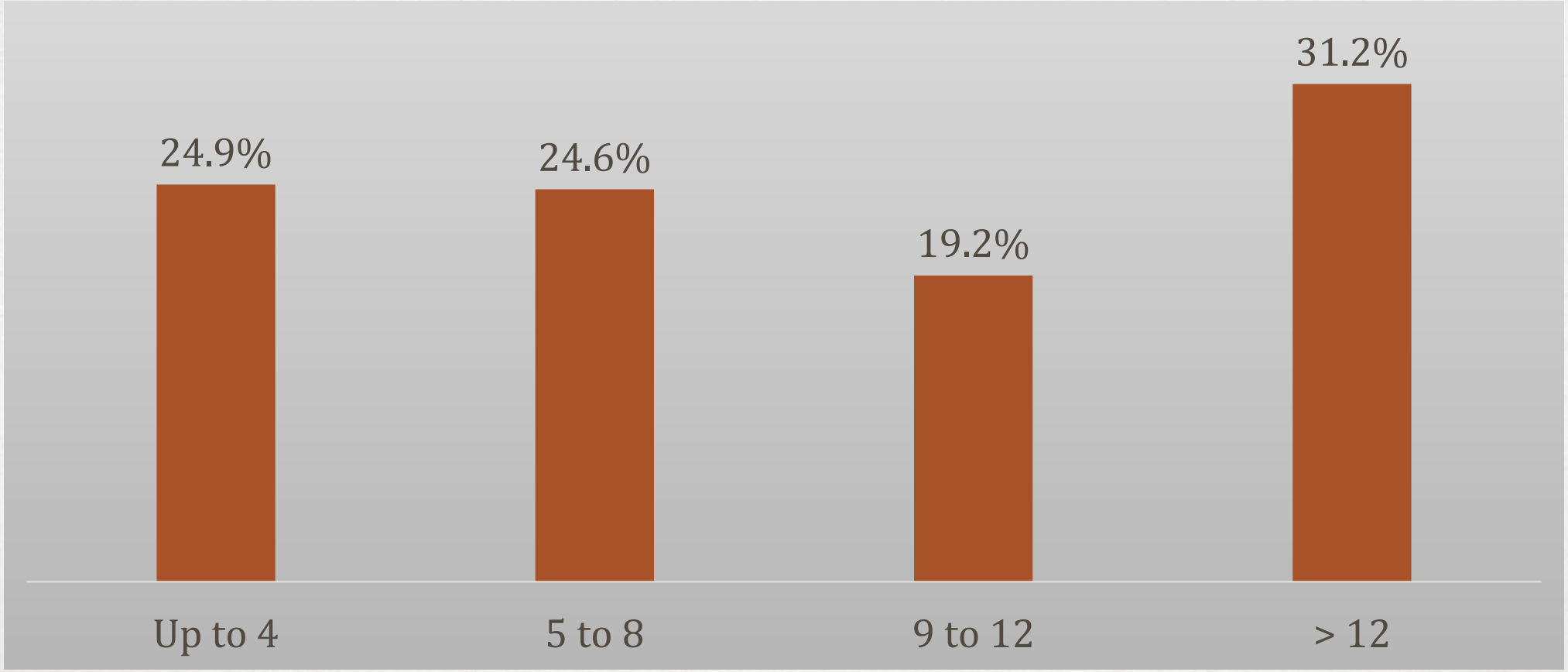
MEASURES

- Necessary nursing activities
  - Important patient/family teaching
  - Talk/comfort patients
  - Important documentation
  - Adequate supervision of technicians
  - Adequate monitoring of dialysis treatments
  - Adequate patient surveillance
  - Coordinating patient care

MEASURES

- Nurse-Reported Adverse Patient Events (derived from Aiken et al., 2001)
  - Patient falls with and without injury
  - Wrong medication given
  - Hospital admissions
  - Emergency room visits
  - Vascular access bleeding
  - Vascular access infiltration
  - Vascular access thrombosis
  - Patient complaints
  - Skipped dialysis treatments
  - Shortened dialysis treatments
  - Dialysis hypotension
- Event frequency reported (1 = never to 7 = daily)

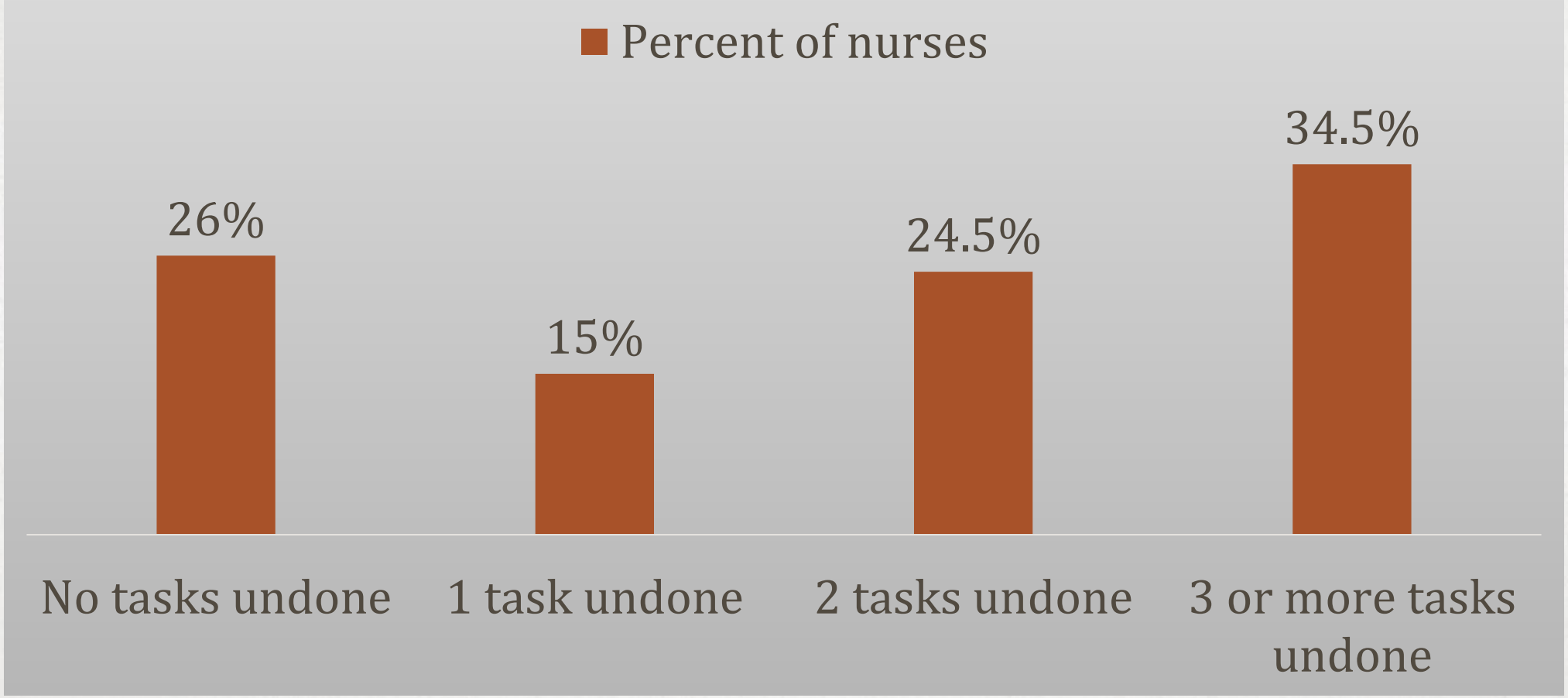
PATIENT TO RN RATIOS IN QUARTILES (n = 422)



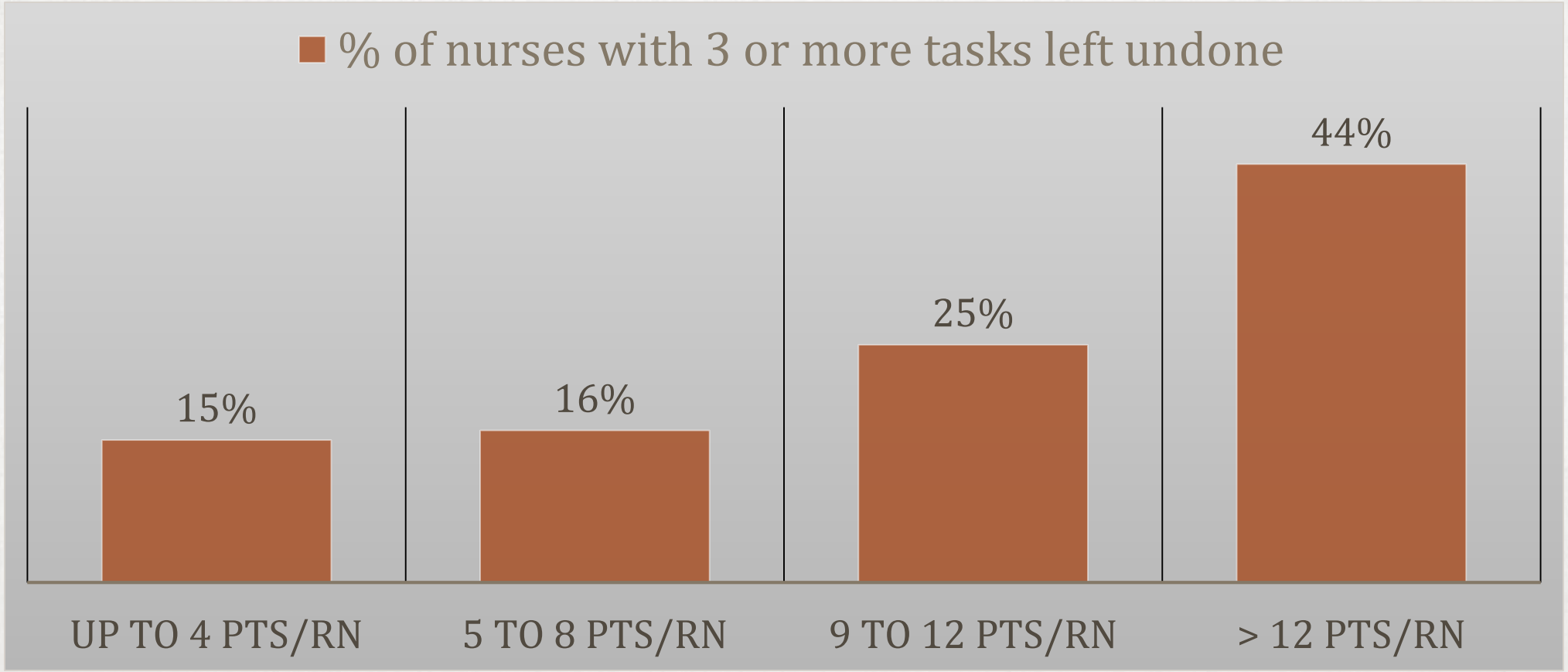
TASKS LEFT UNDONE BY NURSES ON LAST DAY WORKED (N = 422)

	% of nurses
Important patient/family teaching	60
Talk/comfort patients	50
Important documentation	26
Adequate supervision of technicians	25
Adequate monitoring of dialysis treatments	20
Adequate patient surveillance	15
Coordinating patient care	12

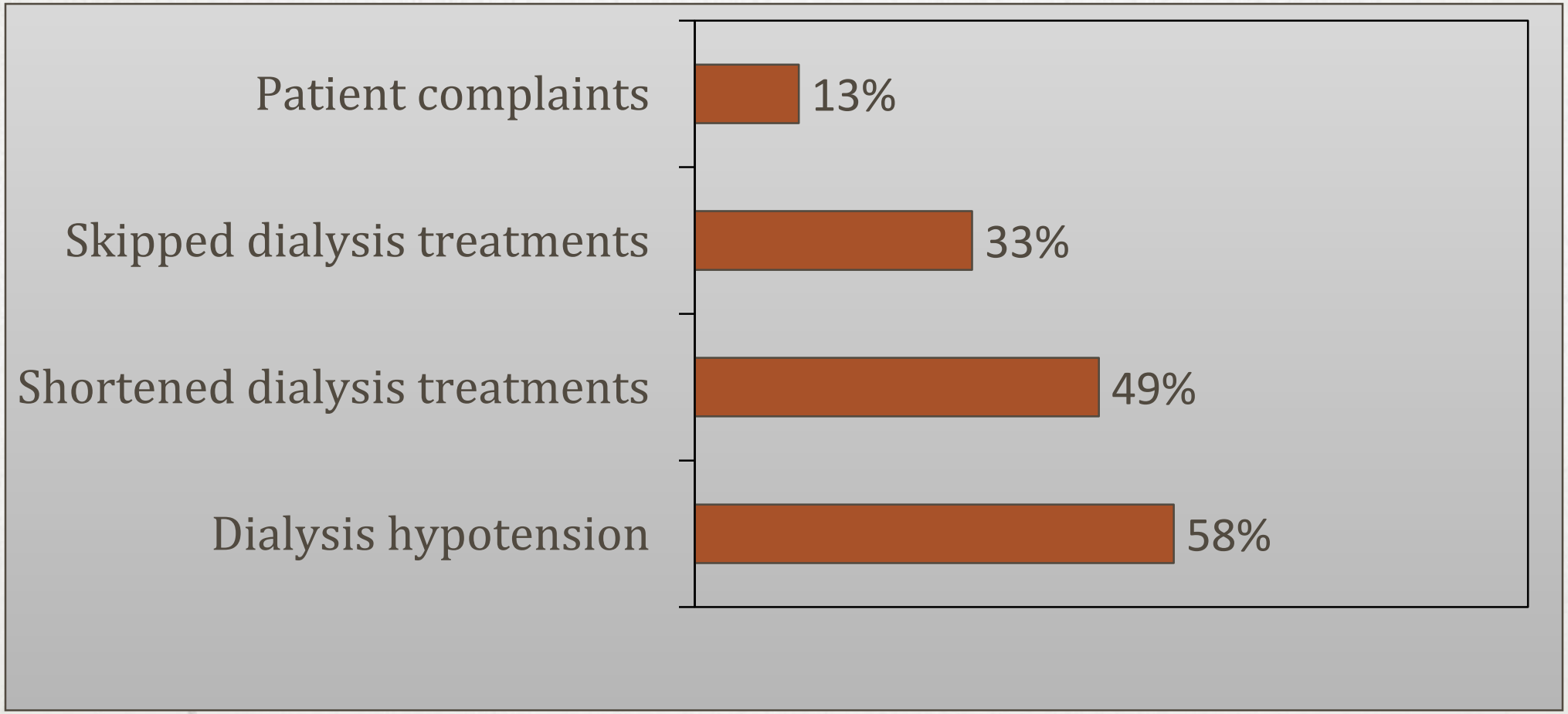
TASKS LEFT UNDONE ON LAST DAY WORKED (n = 422)



IMPACT OF RN STAFFING ON TASKS LEFT UNDONE



PERCENT OF NURSES REPORTING MOST FREQUENTLY OCCURRING ADVERSE EVENTS (Few Times a Week to Daily)



EFFECTS OF *RN STAFFING* AND *MISSED CARE* ON RISK-ADJUSTED ODDS OF NURSES REPORTING FREQUENT ADVERSE EVENTS

Adverse Event	Odds Ratio (12 or more patients vs 4 patients or less)	Odds Ratio (3 or more tasks left undone vs no tasks left undone)
Dialysis Hypotension	NS	2.72**
Shortened Dialysis Treatments	3.79***	2.03*
Skipped Dialysis Treatments	2.27**	1.92*
Patient Complaints	NS	3.00**

*p<.05; **p<.01; ***p<.001

SUMMARY OF KEY STUDY FINDINGS

- Higher PT-to-RN ratios (less RN staffing) significantly associated with RN reports of frequent adverse events including skipped dialysis treatments, shortened dialysis treatments, and patient complaints.
- Higher PT-to-RN ratios (i.e., less RN staffing) significantly associated with higher numbers of tasks left undone on the RNs last shift worked.
- Higher numbers of tasks left undone significantly associated with RN reports of frequent adverse events including dialysis hypotension, skipped dialysis treatments, shortened dialysis treatments, and patient complaints.
- High PT-to-RN ratios (> 12 pts/RN) and 3 or more necessary tasks left undone, when considered separately or combined, significantly predicted more frequent adverse events in dialysis units, as reported by nurses providing their care.

DOES RN STAFFING AND MISSED NURSING CARE IN DIALYSIS UNITS MATTER?

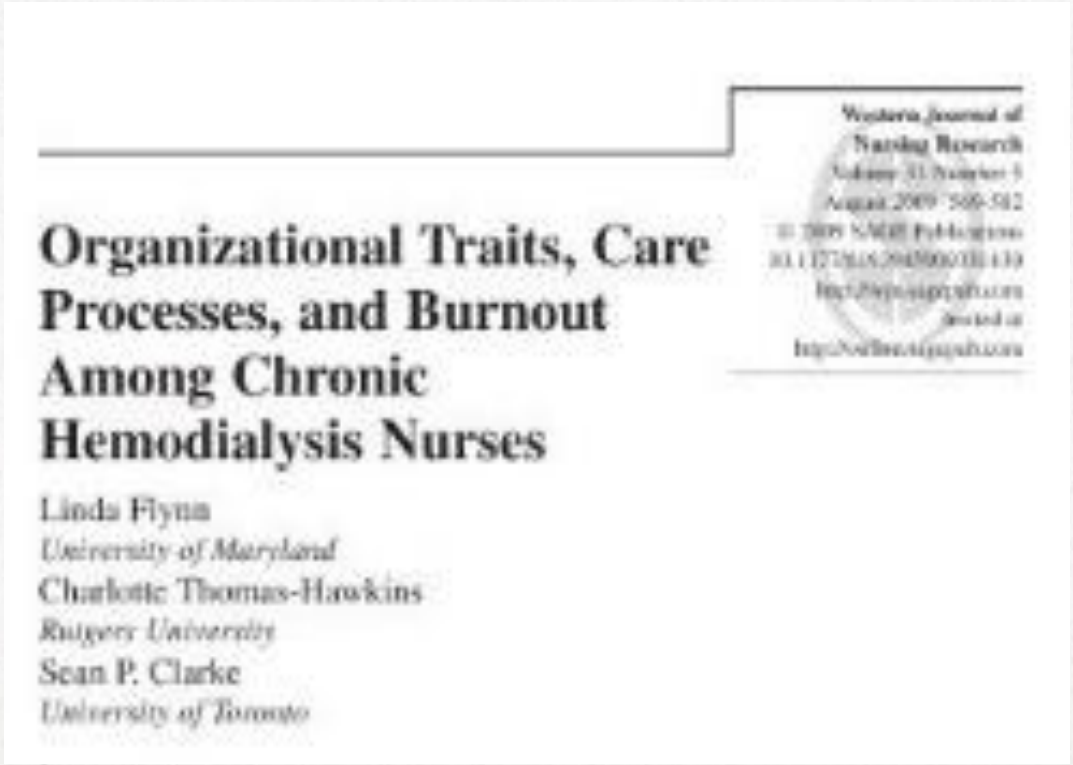
- Findings from this study suggest that low RN staffing and missed nursing care matter in that these indicators are associated with frequent adverse patient events in dialysis units, as reported by nurses who provide care to dialysis patients.

NURSE BURNOUT IN DIALYSIS UNITS

DOES IT MATTER?

Flynn, Thomas-Hawkins, & Clarke (2009)

Western Journal of Nursing Research 31(5), 569-582



Western Journal of Nursing Research

Organizational Traits, Care Processes, and Burnout Among Chronic Hemodialysis Nurses

Linda Flynn
University of Maryland
Charlotte Thomas-Hawkins
Rutgers University
Sean P. Clarke
University of Toronto

STUDY PURPOSE

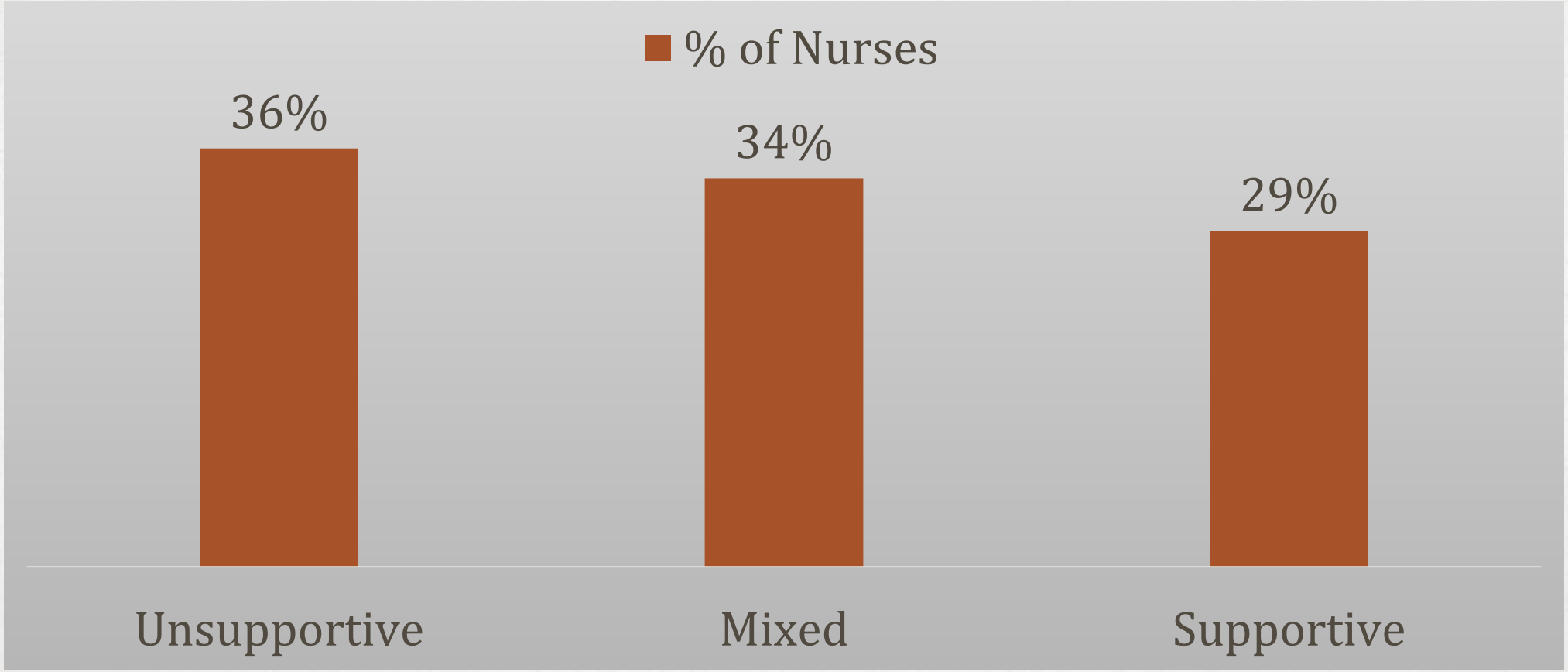
- A secondary analysis of existing data to:
  - Describe prevalence of burnout among nurses in study sample
  - Determine effects of RN staffing, workload, work environment support, and missed care on RN burnout
  - Determine effect of RN burnout on intent-to-leave job

RN WORKLOAD IS DIFFERENT THAN PT-TO-RN RATIOS

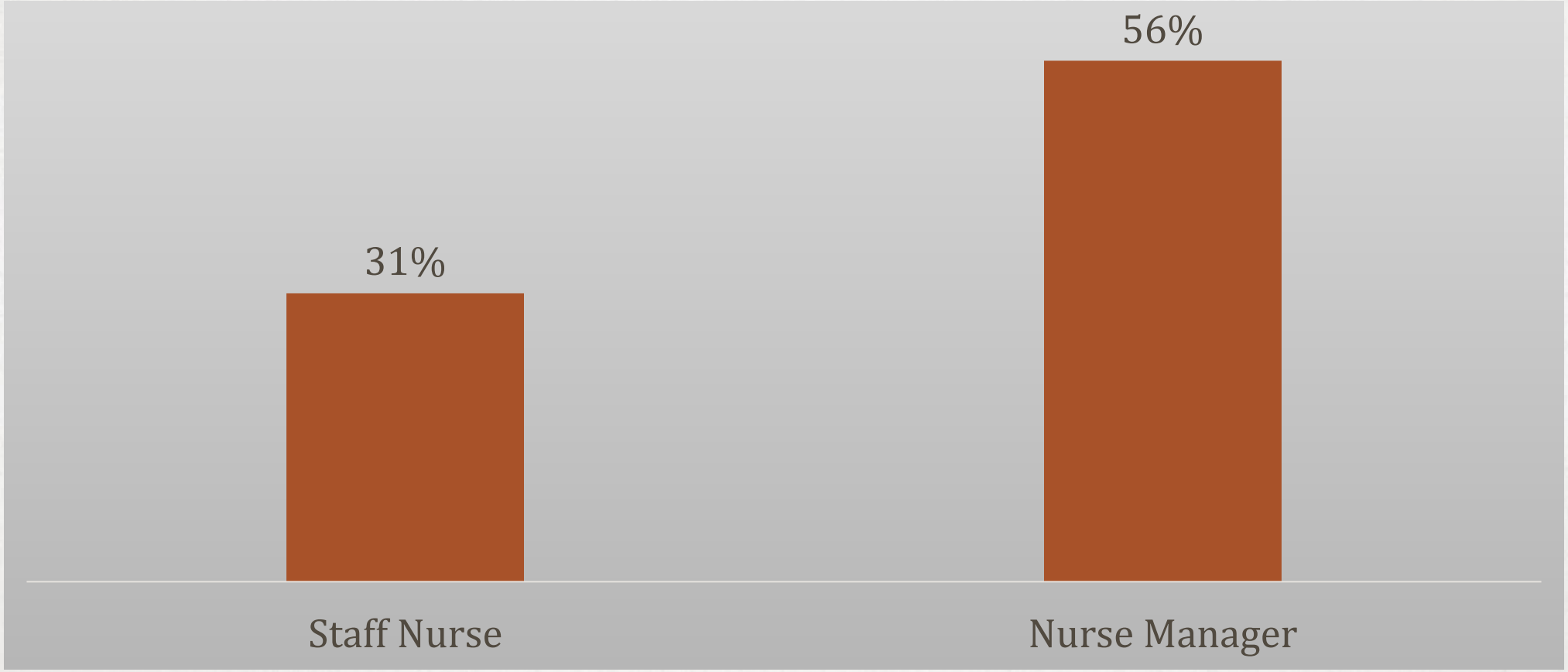
(n = 422)

	% of nurses
1. Unable to take a 30 minute break during shift	21.3
2. Most days my workload is unreasonable	28.6
3. My workload will cause me to look for a new position	23.3
4. My workload has caused me to miss an important change in patients' condition	46.8
5. I have voiced concerns about my workload being to heavy to management	55.6

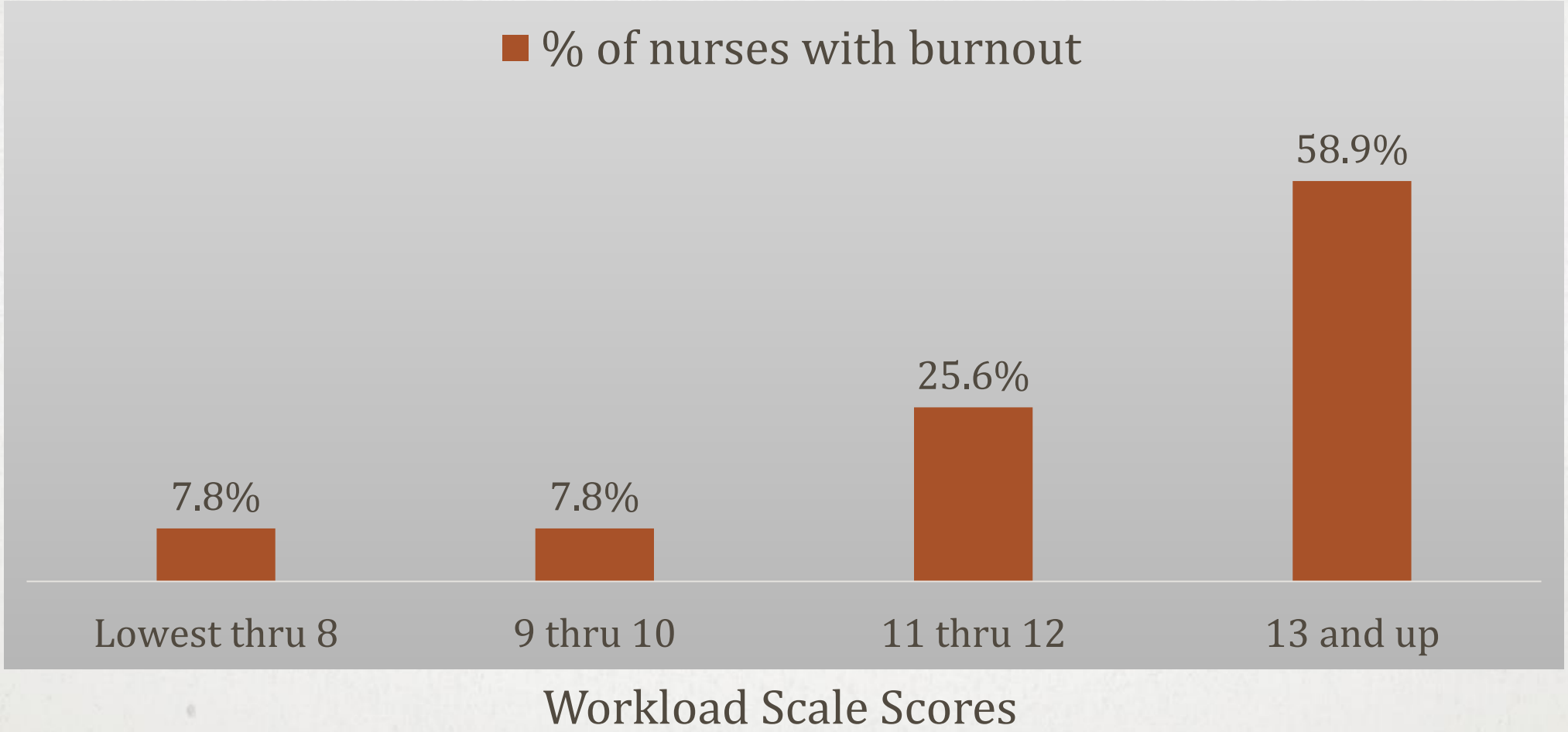
DIALYSIS WORK ENVIRONMENT SUPPORT (n = 422)



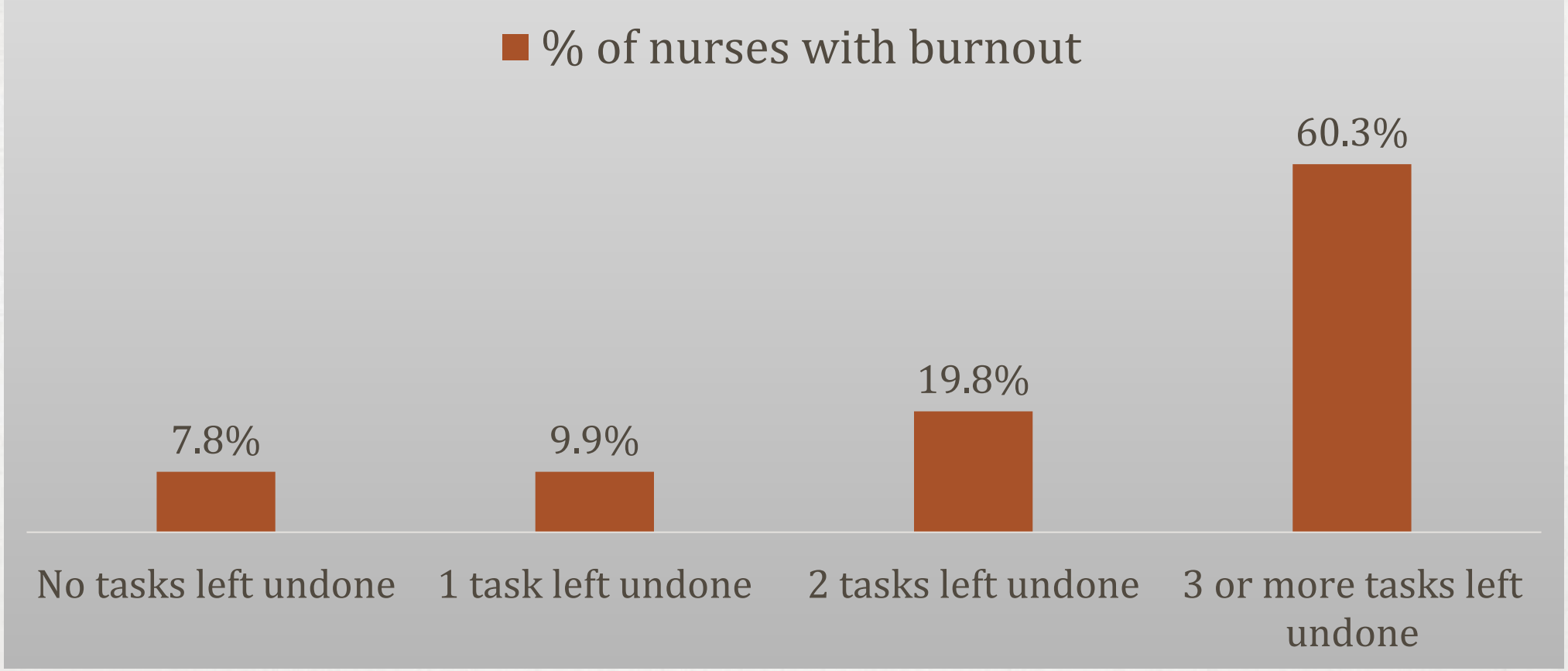
PERCENT OF NURSES REPORTING BURNOUT



IMPACT OF WORKLOAD ON RN BURNOUT



IMPACT OF MISSED CARE ON RN BURNOUT



SUMMARY OF KEY FINDINGS

- Low RN staffing, high workloads, unsupportive work environments, and missed care were significantly associated with RN burnout.
- Nurses with highest workload were *five times more likely* to report burnout compared to nurses with lowest workload (OR 5.23, $p < .001$).
- Nurses who rated their work environment as least supportive were *four times more likely* to report burnout compared to nurses who rated work environment as most supportive (OR 4.60, $p < .01$).
- Nurses who reported 3 or more tasks left undone on their last shift worked were more than *twice as likely* to report burnout compared to nurses who reported leaving no necessary patient care activities undone (OR 2.68, $p < .05$).
- Burned out nurses were almost *three times more likely* to report they planned to leave their jobs in the next year (OR 2.50, $p < .01$)

DOES RN BURNOUT IN DIALYSIS UNITS MATTER?

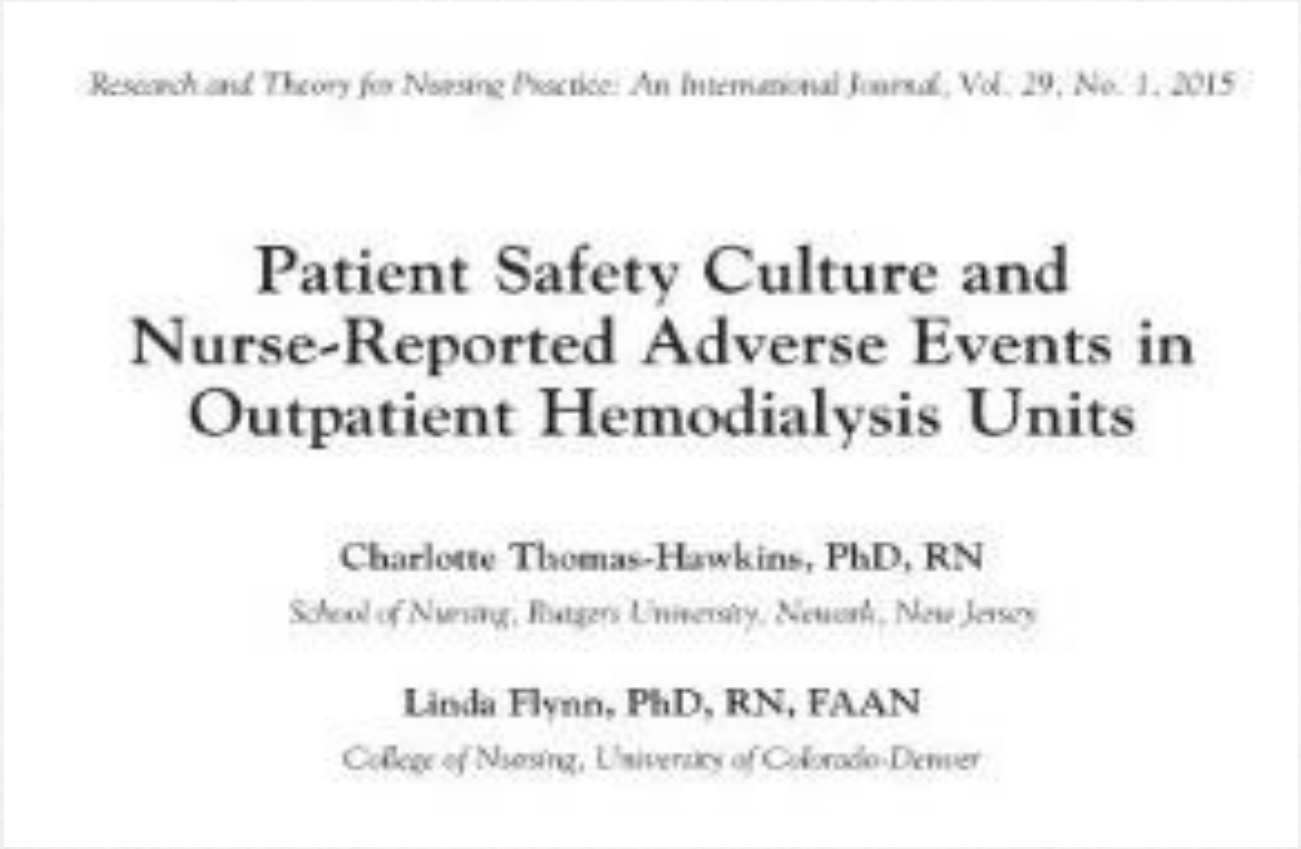
- If nurse retention is a priority in dialysis units, RN burnout matters.

NURSING INDICATORS AND PATIENT SHIFT CHANGE SAFETY

DOES IT MATTER?

Thomas-Hawkins & Flynn (2015)

***Research and Theory for Nursing Practice, 29(1),* 53-65**



Research and Theory for Nursing Practice: An International Journal, Vol. 29, No. 1, 2015

Patient Safety Culture and Nurse-Reported Adverse Events in Outpatient Hemodialysis Units

Charlotte Thomas-Hawkins, PhD, RN

School of Nursing, Rutgers University, Newark, New Jersey

Linda Flynn, PhD, RN, FAAN

College of Nursing, University of Colorado-Denver

STUDY PURPOSE

- A secondary analysis of existing data to:
  - Describe nurses' ratings of patient transition safety during patient shift changes
  - Examine relationships among work environment support, nurse staffing, perceived workload, missed care, patient transitions safety, and nurse-reported adverse events in outpatient hemodialysis settings.

HOSPITAL SURVEY ON PATIENT SAFETY CULTURE MODIFIED ITEMS

Patient transitions safety items
1. Things fall between the cracks during patient shift change
2. Important patient care information is lost during patient shift change
3. Patient shift change is often problematic in this dialysis unit
4. Problems often occur in the exchange of information during patient shift change

HOSPITAL SURVEY ON PATIENT SAFETY CULTURE MODIFIED ITEMS

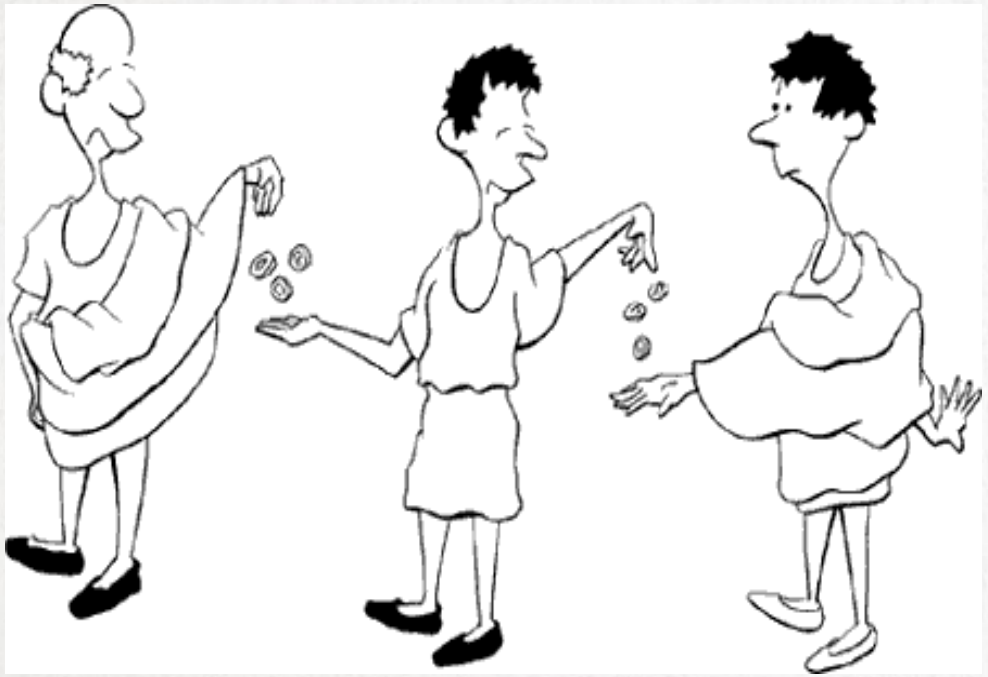
Patient transitions safety items	% agreement with item
1. Things fall between the cracks during patient shift change	71.6
2. Important patient care information is lost during patient shift change	58.3
3. Patient shift change is often problematic in this dialysis unit	55.2
4. Problems often occur in the exchange of information during patient shift change	57.6

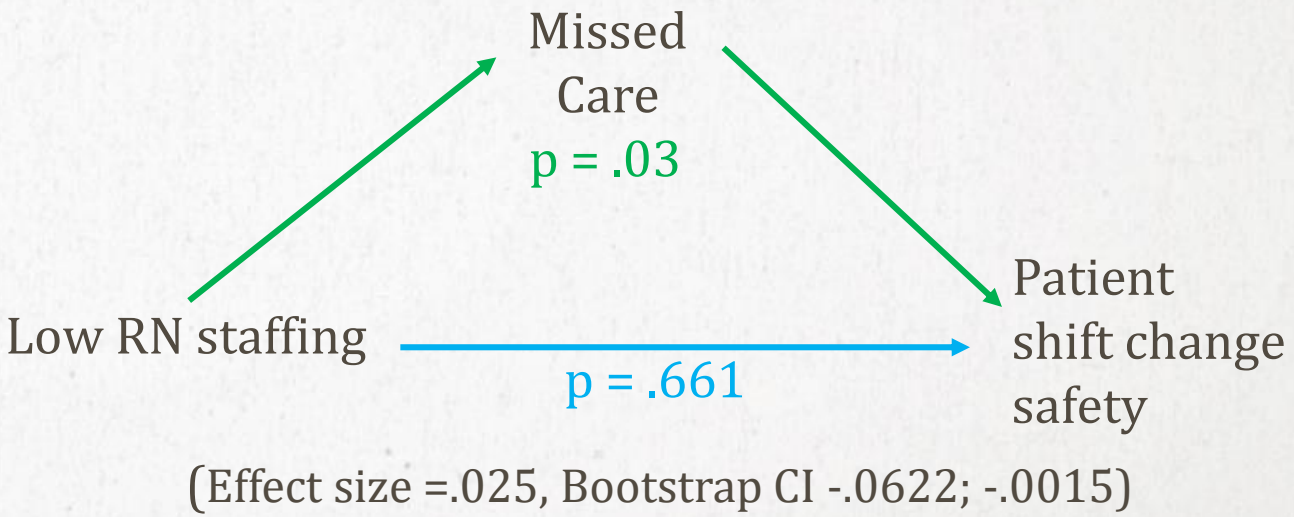
Only 39% of nurses positively endorsed patient transition safety.

PATIENT TRANSITION SAFETY DIFFERENCES BETWEEN HOSPITAL-BASED AND CORPORATE-OWNED UNITS

Unit type	n	Mean patient transition score (possible range 1 -5)
Hospital-Based	192	3.22
Corporate-Owned	216	2.80
p = .000		

MISSED CARE IS AN IMPORTANT *"PATHWAY"* FOR THE EFFECT OF RN STAFFING *ON PATIENT SHIFT CHANGE SAFETY*

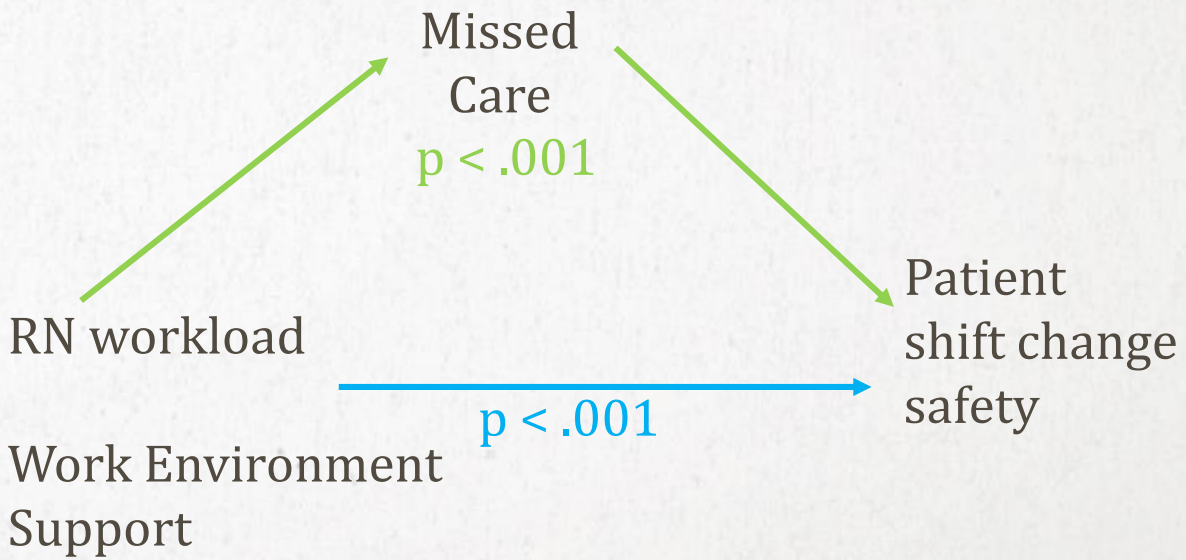




(Effect size =.025, Bootstrap CI -.0622; -.0015)

PATHWAY IS BOTH DIRECT AND INDIRECT FOR EFFECTS OF WORKLOAD AND WORK ENVIRONMENT SUPPORT ON PATIENT SHIFT CHANGE SAFETY

- High RN workload has small negative *indirect* (ES -.056) and *direct* (-.090) effect on patient shift change safety
- Supportive work environment has substantial *indirect* (ES .275) and *direct* (ES .608) effects on patient shift change safety



SUMMARY OF KEY FINDINGS

- High RN workloads, unsupportive work environments, 3 or more tasks left undone were independent predictors of unsafe patient shift changes in dialysis units.
- Low RN staffing has a significant indirect effect on unsafe patient shift change through its direct effect on missed care.
- Compared to nurses who rate patient shift change as safe, nurses who reported patient shift change as unsafe were up to *twice as likely* to report frequent occurrences of skipped and shortened dialysis treatments, and vascular access bleeding, infection, and thrombosis in their dialysis units.
- These nurses were also almost *three times more likely* to report frequent patient complaints in their dialysis units.

DOES NURSING IMPACT ON PATIENT SHIFT CHANGE SAFETY MATTER?

- If a safe transition of patients during patient shift change is a priority in dialysis units, our analysis suggests that RN staffing, workload, work environment support, and the adequacy of nursing care processes matter.

POLICY IMPLICATIONS

- In order to promote the health and safety of the growing numbers of patients with ESRD, federal, state, and dialysis organization policies must foster structures and processes of care in dialysis units that effectively utilize the invaluable skills and services of professional, registered nurses.
- Nurse burnout and, subsequently, intentions to leave can be reduced by ensuring reasonable workloads, creating a supportive work environment, and redesigning responsibilities so that nurses have time to complete important and necessary care activities
- Need for routine assessments of safety culture in dialysis units to identify threats to patient safety and improve the outcomes of patients

KNOW & USE THE EVIDENCE!!