

Errors of Omission: Missed Nursing Care

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Presented by:

VHA Office of Nursing Services
The Nursing Research Field Advisory Committee, VHA
VHA Office of Quality Safety, and Value



MISSED NURSING CARE

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Veterans Administration
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Presentation Outline

- 1. Nursing care missed**
- 2. Reasons for missed nursing care**
- 3. Staff nurse outcomes**
- 4. Patient outcomes**
- 5. Teamwork**
- 6. Strategies**

Poll Question

To what extent missed nursing care is a problem in your organization?

- Not a problem at all!
- A minor problem
- A significant problem
- It's an epidemic!
- I have no idea

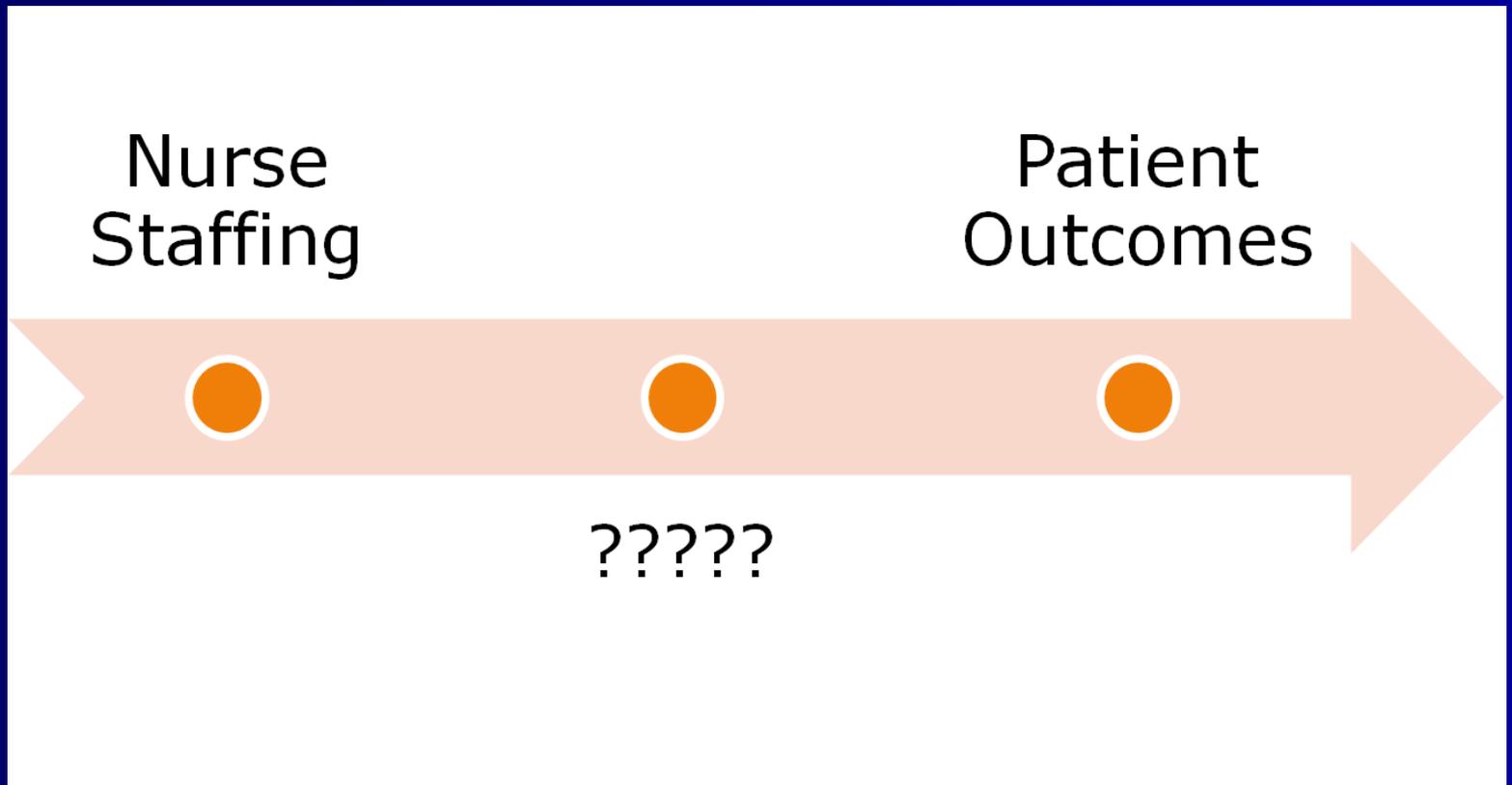
MISSED NURSING CARE

...Any aspect of required patient care omitted or delayed

ERRORS OF OMISSION



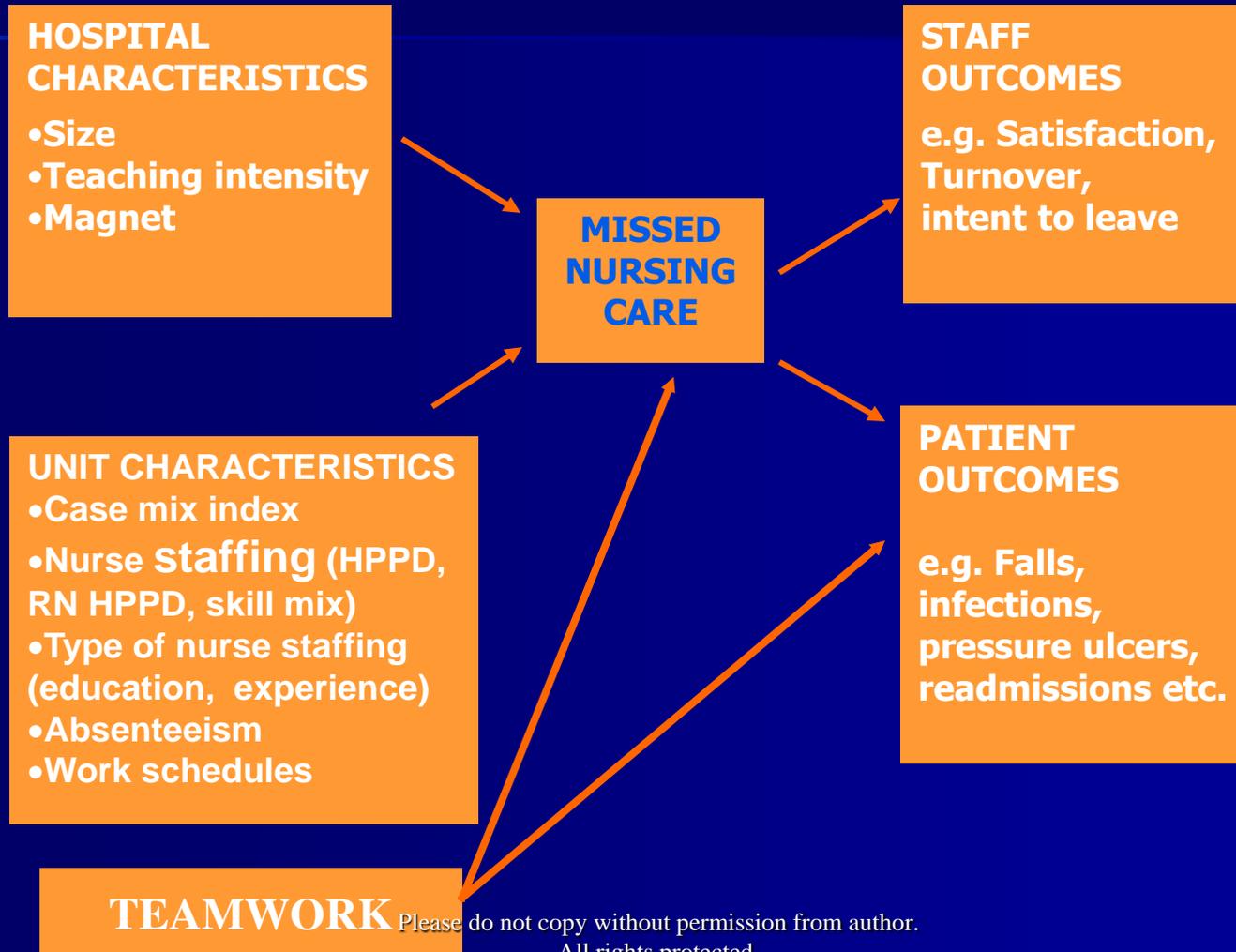
What we DON'T know



CONCEPTUAL FRAMEWORK

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THE MISSED NURSING CARE MODEL



How much nursing care is being missed?

Kalisch B. (2006). Missed nursing care: A qualitative study. *Journal of Nursing Care Quality*, 21:4; 306-313.

Missed Care: A Qualitative Study

9 areas of missed care

- Ambulation
- Turning
- Delayed or missed feedings
- Patient education
- Discharge planning
- Emotional support
- Hygiene
- Intake and output documentation
- Surveillance

Kalisch B & Williams R. (2009) The development and psychometric testing of a tool to measure missed nursing care (*MISSCARE Survey*). *Journal of Nursing Administration*. 39 (5). 211-219.

The Development & Psychometric Testing of the "MISSCARE Survey"

- **Acceptability**
- **Validity**
 - Content validity
 - Construct validity (EFA and CFA)
- **Reliability**
 - Consistency: Cronbach's alphas 0.88 to 0.64
 - Test-retest: 0.87

Kalisch B, G. Landstrom & R. Williams, (2009) . Missed Nursing Care: Errors of Omission, *Nursing Outlook*, 57(1), 3-9.

Missed Care and Reasons: 3 Hospital Study

■ **Research questions**

- What nursing care is missed?
- What are the reasons for missing care?

■ **Methods**

- 3 hospitals in same system (459 RNs), 35 patient units
- MISSCARE Survey-- response rate 57%

■ **Findings**

- Large amount of missed care
- Reasons – labor, material and communication

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Kalisch, B., Tschannen, D., Lee, H., & Friese, C. (2011). Hospital variation in missed nursing care. *American Journal of Medical Quality*.

Variations of Missed Care and Reasons across 11 Hospitals

Research Questions

- To what **extent** is nursing care missed?
- How does **missed nursing care vary across hospitals**?
- What are the **reasons** for missed nursing care?
- Do **reasons** for missed care **vary** across hospitals?
- Does missed nursing care vary by **staff characteristics**?

Study Sample

- Nursing staff on 124 adult patient care units in 11 hospitals.
- 4,412 nursing staff (3,349 RNs, 83 LPNs and 980 NAs)
- Return rate 57.3%
- Hospitals ranged from 60 to 913 beds
- Age (over 35 yrs) 55%
- Gender (female): 90%
- Nursing education (BSN or higher): 49%
- Experience (greater than 5yrs): 54%
- Occupation (RN): 73%
- Employment status (more than 30 hrs/wk): 82%
- Shift worked (day or rotating shift): 58%

Measures

- *The MISSCARE Survey*

- *Nursing Teamwork Survey (NTS)*

- Kalisch, B., Lee, H., & Salas, E. (2010). The development and testing of the nursing teamwork survey. *Nursing Research*, 59(1): 42-50.

- *MISSCARE Survey-Patients*

From hospital administrative data (unit level variables)

- Actual turnover
- HPPD, RN HPPD, skill mix
- Unit Case Mix Index (CMI)
- Average daily census
- Fall rates

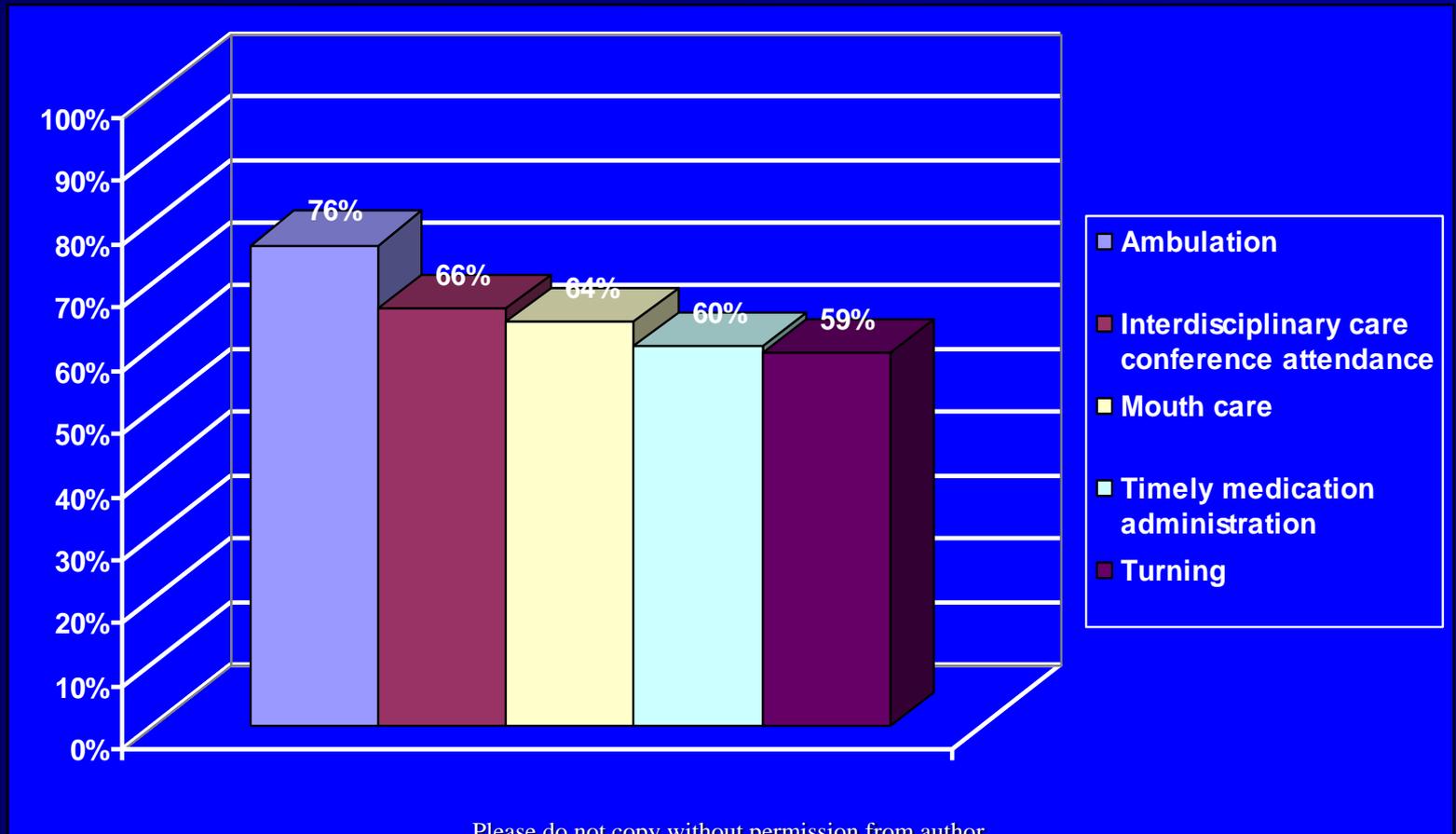
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To what extent is nursing care missed?

Missed Nursing Care

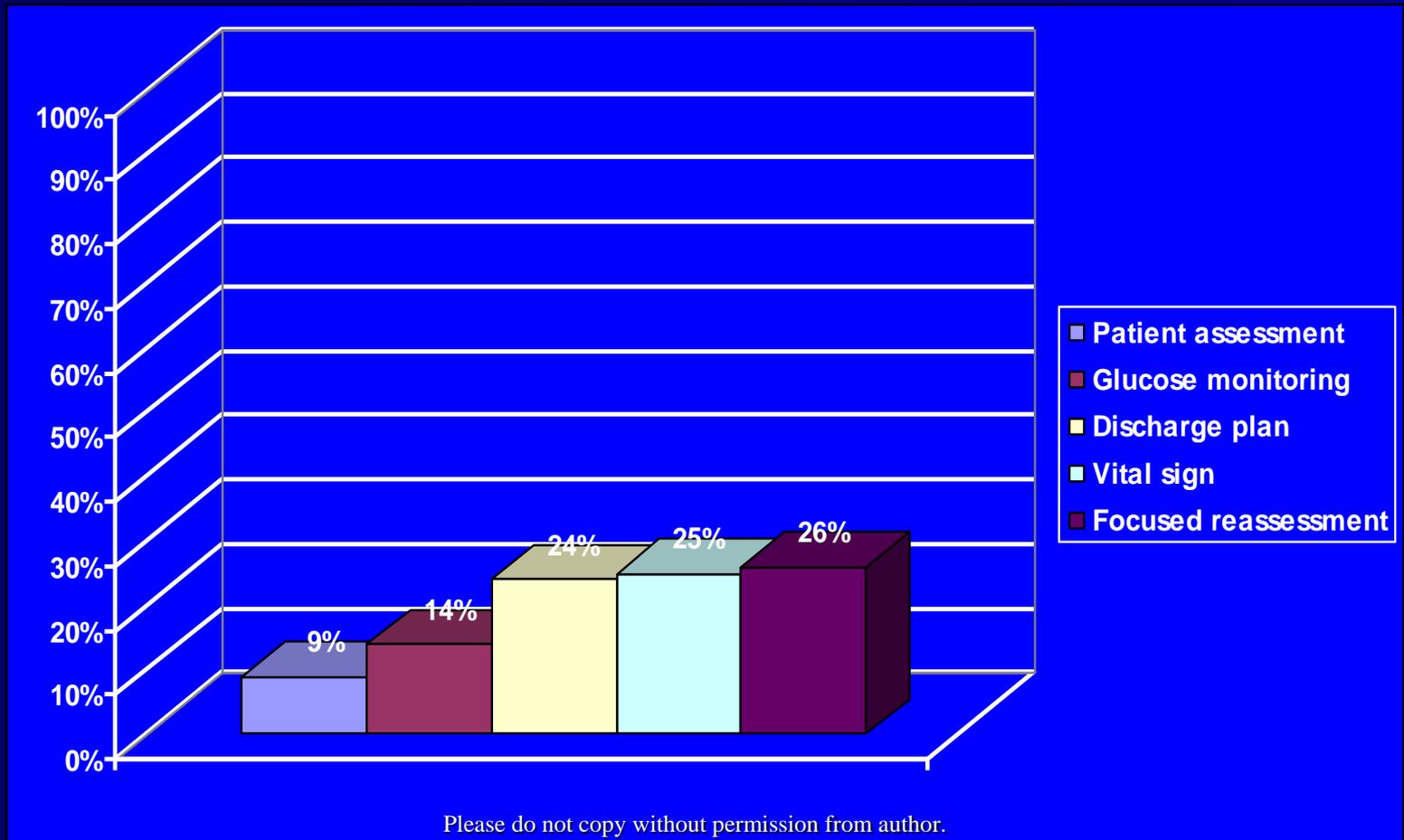
Elements of Nursing Care	% missed
Ambulation three times per day or as order	76%
Interdisciplinary rounds	66%
Mouth care	64%
Medications administered on time	60%
Feeding patient when the food is still warm	57%
Patient teaching	55%
Response to call light within 5 minutes	50%
Patient bathing/skin care	45%
Emotional support to patient and/or family	42%

5 Most Often Missed Nursing Care



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5 Most Least Missed Nursing Care



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Kalisch, B., McLaughlin, P. and Dabney, B. (2012). Patients perceptions of missed nursing care. *Joint Commission Journal on Patient Safety*, 38(4), 161-167.

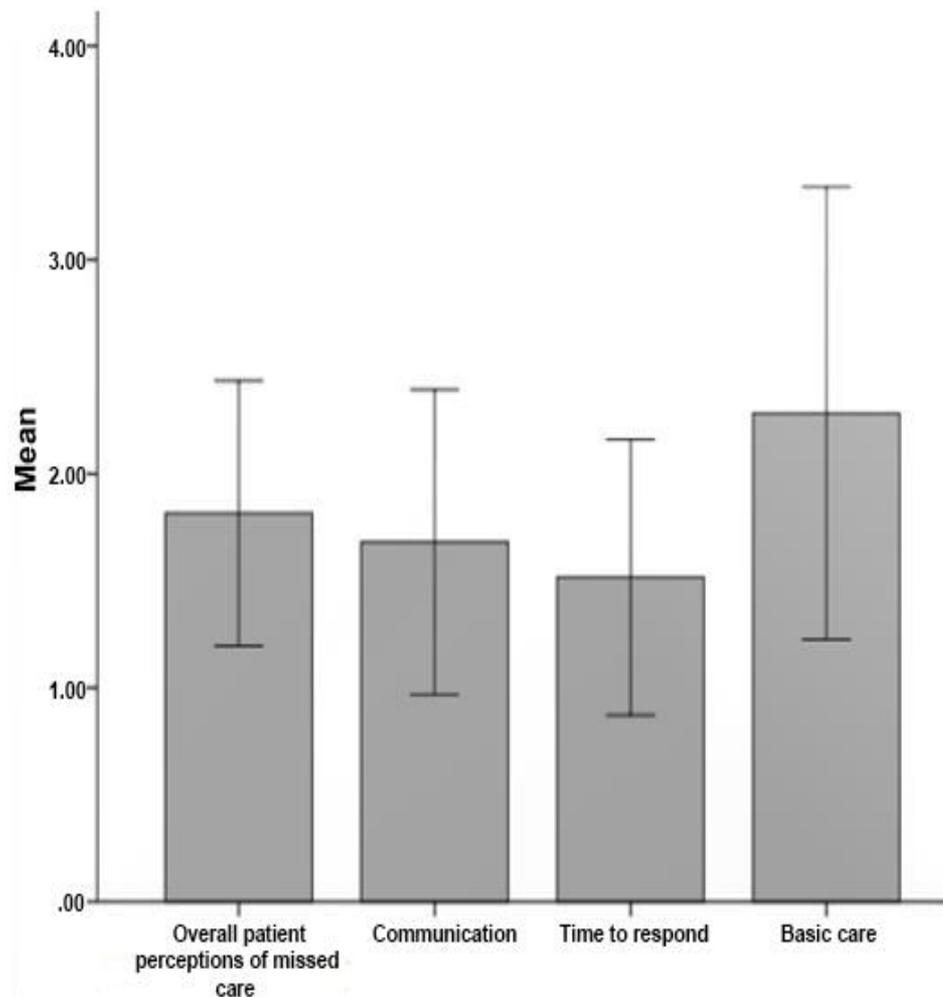
What can patients report about nursing care that is missed?

- Sample: 38 patients
- Method: In depth, semi-structured interviews
- Fully reportable (e.g. bathing, mouth care, pain medication)
- Partially reportable (e.g. hand washing, vital signs, patient education)
- Not reportable (e.g. nursing assessment, skin assessment, intravenous site care)

Kalisch, B., Xie, B., & Dabney, B. (in press). Patient reported missed nursing care correlated with adverse events. *American Journal of Medical Quality*.

What nursing care do patients report as missed?

2 hospitals, 729 patients



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MOST AND LEAST MISSED

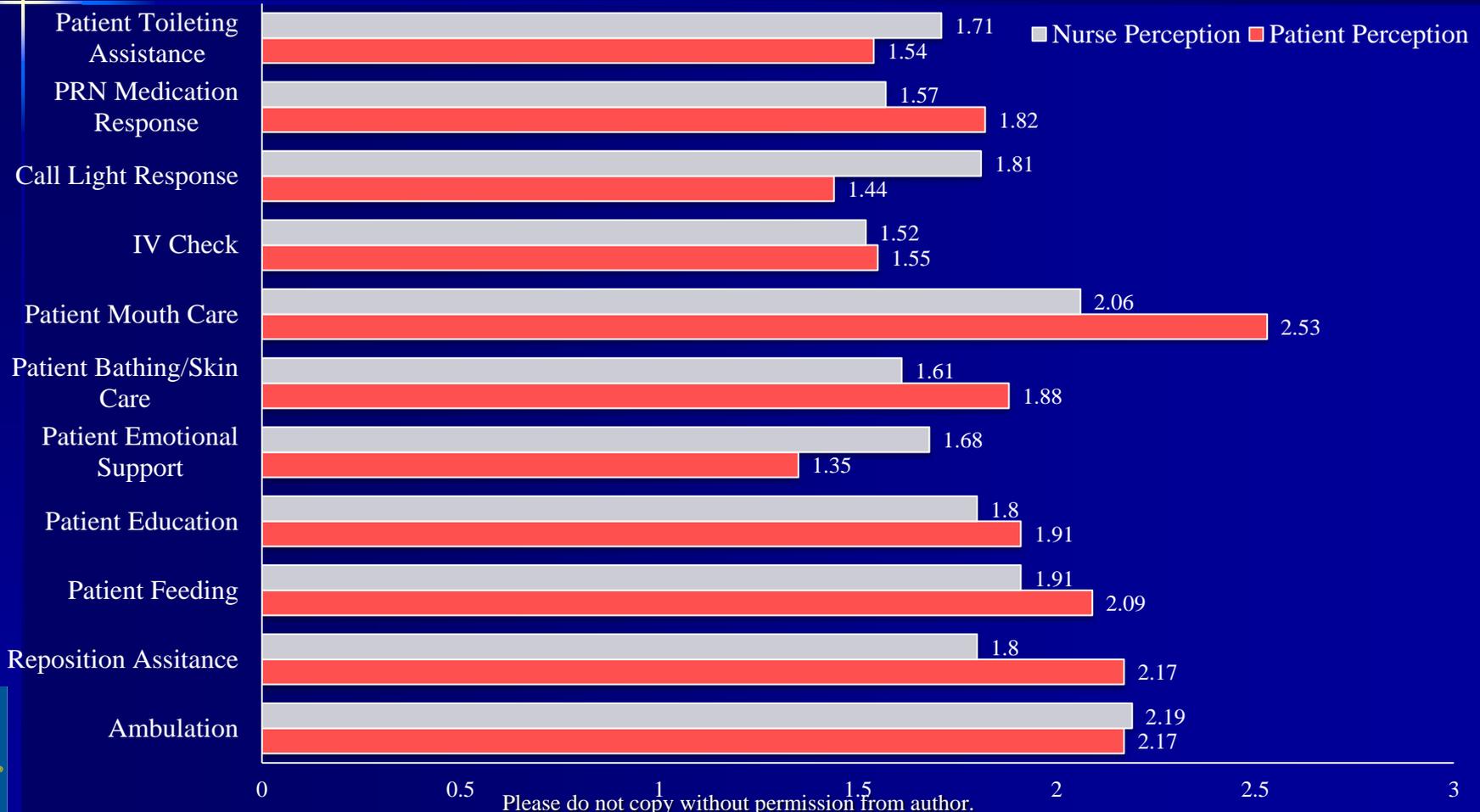
MOST MISSED

- (1) Mouth care (50.3%)
- (2) Ambulation (41.3%)
- (3) Getting out of bed into a chair (38.8%)
- (4) Providing information about tests/procedures (27%)
- (5) Bathing (26.4%)

LEAST MISSED

- (1) Not listening to patients' questions and concerns (7.8%)
- (2) Not answering call lights (8.6%)
- (3) Not responding to beeping monitor (8.8%)
- (4) Requests not fulfilled (10.3%)
- (5) Not being helped to the bathroom (10.9%).

Comparison of Identified Missed Nursing Care : Nursing Staff vs. Patients



Note: 1=Rarely or never missed, 2=Occasionally missed, 3=Frequently missed, 4=Always missed

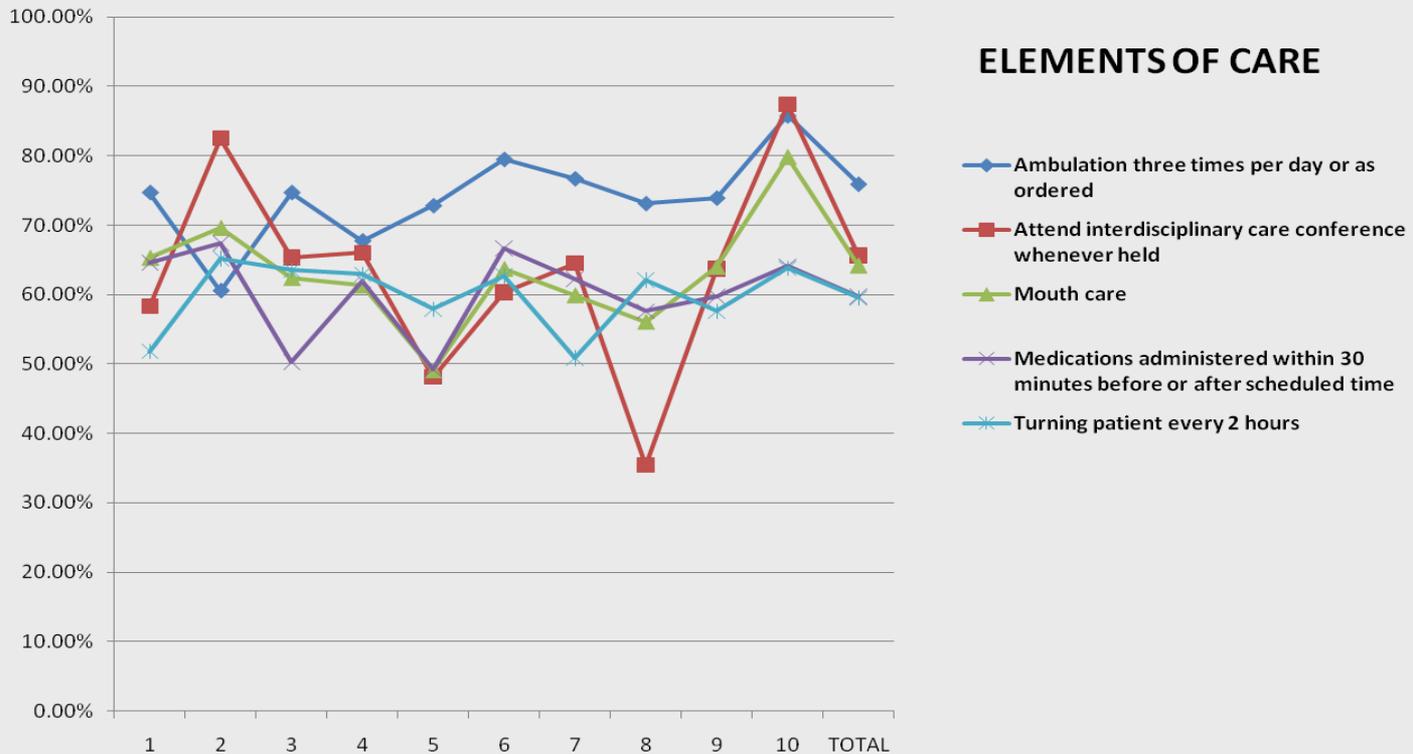
Does missed care vary across hospitals?



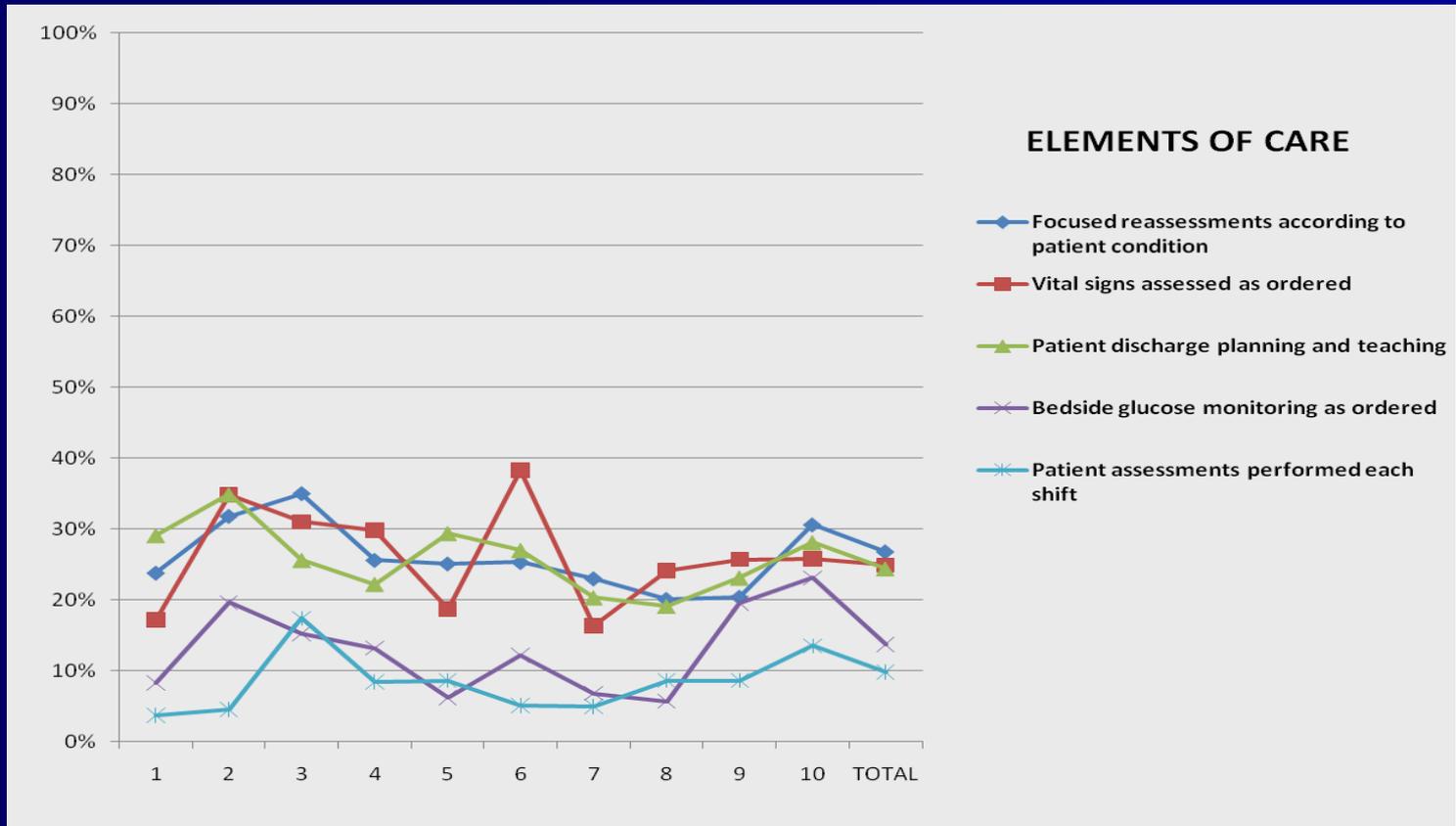
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5 MOST OFTEN MISSED

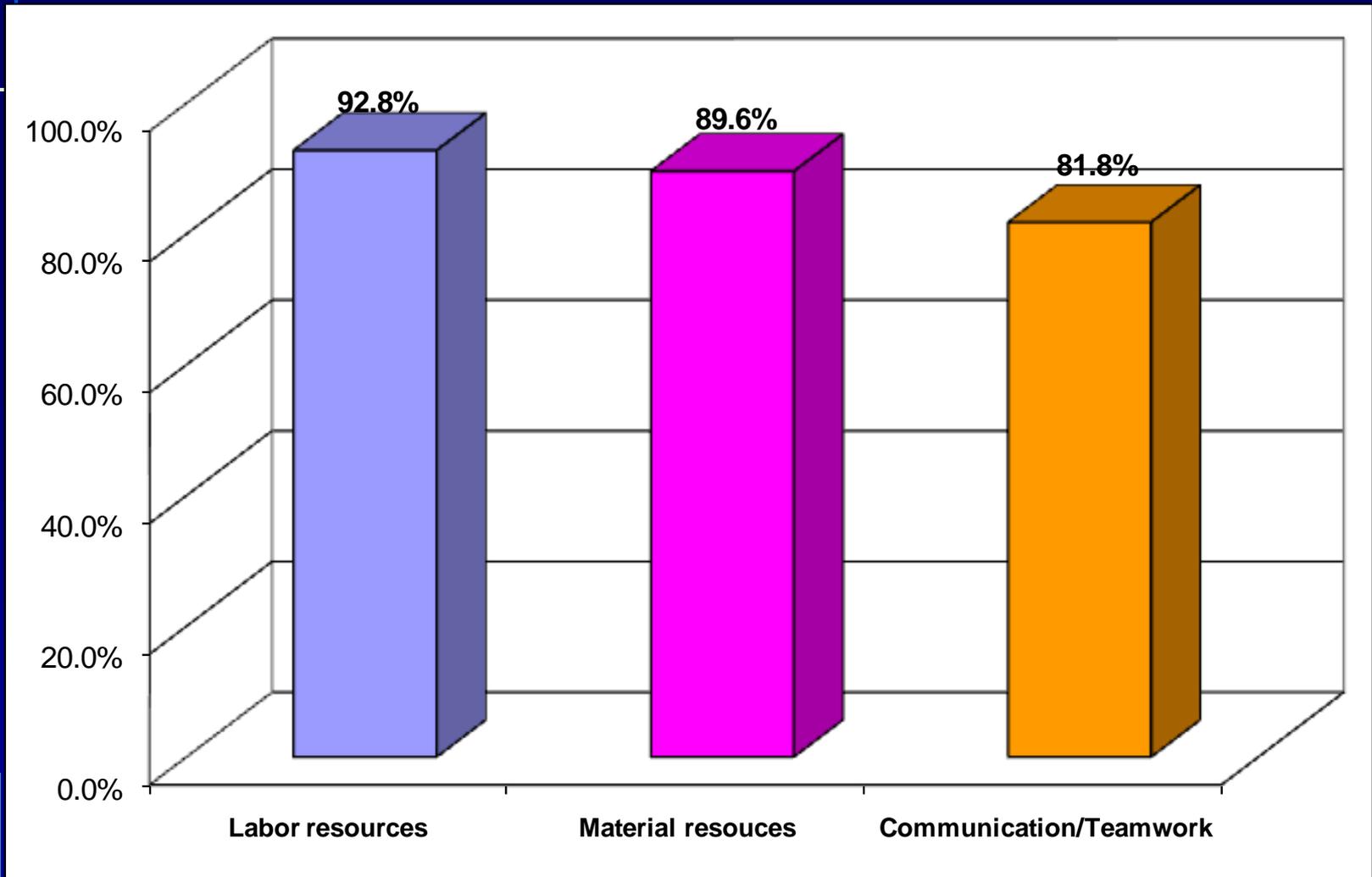


5 LEAST MISSED CARE



What are the reasons for missed nursing care?

Overall Reasons for Missed Care



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Cognitive Reasons

FATIGUE

- Long work hours
- Mandated overtime
- Rotating shifts
- Lack of breaks
- Multiple jobs
- Moral distress
- Burnout
- Compassion fatigue

Cognitive Reasons (continued)

- **Interruptions, multitasking and task switching**
- **Cognitive biases**
 - Omission bias, bandwagon effect, status-quo bias
- **Complacency and habit: mind not on task**

How do reasons for missed care vary across hospitals?



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How are staff characteristics associated with missed nursing care?

- Gender and education: No difference
- Age: **Under 35** reported less missed care than those over 36
- Experience: **less than 6 months** reported the least
- Work schedules:
 - **Night shifts** less
 - **Less than 12 hour shift** less missed care
- Absenteeism: Staff **missing more shifts**, more missed care

Kalisch, B. (2009). Nurse and nurse assistant perceptions of missed nursing care: What does it tell us about teamwork? *Journal of Nursing Administration*, 39(11):485-493

Do RNs and NAs (nursing assistants) have the same assessment of missed nursing care?

- RNs reported significantly more missed care than NAs
- RNs reported more missed care on elements of care typically completed by NAs

Kalisch, B. and Lee, K. (2012).
Missed nursing care: Magnet
versus non-Magnet Hospitals.
Nursing Outlook, 60 (5):32-39.

***Is there a
difference in
missed
nursing care
in Magnet vs.
non-Magnet
hospitals?***

- Magnet hospitals had significantly less missed care.
- Magnet hospital staff reported less staffing and communication problems.
- There is no difference in staffing levels and type

STAFF OUTCOMES

Does missed nursing care impact staff outcomes?

Kalisch, B., Tschannen, D., and Lee, H. (2011). Does missed nursing care predict job satisfaction? *Journal of Healthcare Management*. 56(2): 117-134.

Does missed nursing care predict job satisfaction &/or occupation satisfaction?

The **more missed nursing care, the higher the dissatisfaction with their current position** ($p < 0.001$) and with their **occupation** (OR = 0.57, 95% CI = 0.41 – 0.80).

Tschannen, D., Kalisch, B., & Lee, K.
(2010). Missed nursing care and
nurse turnover and intent to leave
*Canadian Journal of Nursing
Research*, 42(4): 22-39.

- **Turnover not related** to missed
nursing care.

*Does missed
nursing care
predict intent
to leave
and/or
turnover?*

Relational Job Theory (*Grant*)

People more motivated when they witness a positive impact of their actions on their beneficiaries

Nurses have direct knowledge

Describe their work as protecting the welfare of others

“Benevolent employees” motivated to give more to others than they get back

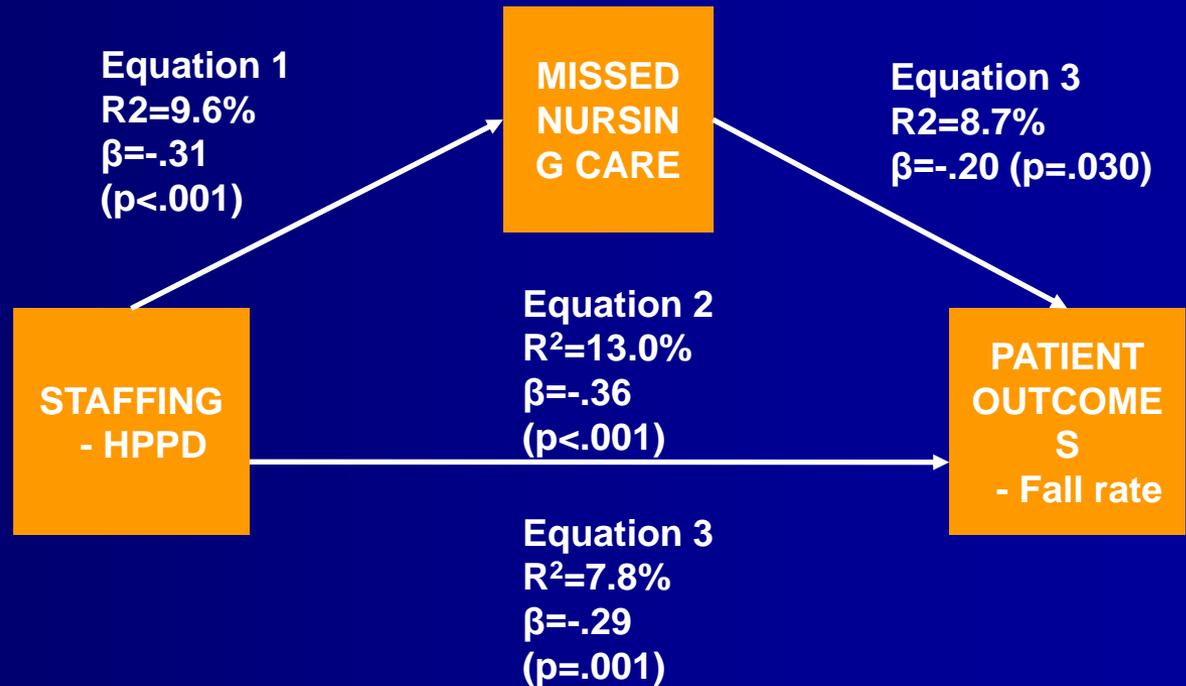
When nurses cannot or do not provide acceptable care, they are more dissatisfied with their jobs than would be true for employees who do not have these values and service orientation.

PATIENT OUTCOMES

Does missed nursing care impact patient outcomes?

Kalisch, B. J., Tschannen, D., & Lee, K. H. (2011). Missed Nursing Care, Staffing, and Patient Falls. *Journal of Nursing Care Quality*,

Does missed nursing care mediate the relationship between staffing and patient falls?



Patient reported missed nursing care and *adverse events*

The higher the patient reported missed nursing care, the more adverse events

- Skin breakdown/pressure ulcers
- Medication errors
- New infections
- Falls
- IVs running dry
- IVs leaking

What difference does missed nursing care make?

- **Failure to ambulate**

- New onset delirium
- Pneumonia
- Delayed wound healing
- Pressure ulcers
- Increased LOS
- Increased pain and discomfort
- Muscle wasting and fatigue
- Physical disability

- **Failure to do mouth care**

- Reluctance to eat
- Pressure ulcer development
- Pneumonia, particularly in ventilated patients

- **Failure to turn**

- Pressure ulcers
- Pneumonia
- Venous stasis
- Thrombosis
- Embolism
- Stone formation
- UTI
- Muscle wasting
- Bone demineralization
- Atelectasis

- **Failure to administer medications**

- Example: Clostridium difficile missing the first two doses of vancomycin—increased LOS

- **Failure to teach**

- Adverse events
- Readmission

What difference does it make?

- **Failure to sleep**

- Mental impairment
- Susceptible to infections
- Slows recovery, longer LOS

- **Failure to wash hands**

- HAIs (CAUTIs, CLABSIs, etc.)

- **Failure to answer call lights**

- Death, adverse events
- Falls
- Increased LOS
- Increased pain & discomfort

- **Failure to eat**

- Greater mortality
- Higher nursing home use
- Infections
- Increased LOS
- Readmission
- Higher costs

- **Failure to provide emotional support**

- Feelings of not being safe
- Lack of hope
- Distressed, agitated
- Inability to cope

- **Failure to do interdisciplinary rounds**

- Adverse events
- Readmissions
- Catheters in too long
- Higher mortality

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Post Hospital Syndrome

During hospitalization, patients are commonly deprived of sleep, experience disruption of normal circadian rhythms, are nourished poorly, have pain and discomfort, confront a baffling array of mentally challenging situations, receive medications that can alter cognition and physical function, and become deconditioned by bed rest or inactivity. Each of these trepidations can adversely affect health and contribute to substantial impairments during the early recovery period, an inability to fend off disease, and susceptibility to mental error (Krumholtz, NEJM, 2013).

Post Hospital Syndrome

(continued)

- Hospitalization sentinel event often precipitates disability
 - Inability to live independently--basic ADLs
- Hospitalization-associated disability -- one-third of patients 70 years of age and over
- 20% readmitted; \$26 billion annually



TEAMWORK

Kalisch, B., Gosselin, A. and Choi, S. (2012).
A comparison of patient care units with
high versus low levels of missed nursing
care. *Health Care Management Review*.
37(4), 320-328.

***How do patient
care units with
high vs. low
levels of
missed nursing
care differ?***

- Qualitative study
 - 5 units with the most missed care
 - 5 units with the least missed care
- Key primary difference was teamwork

Kalisch, B., Weaver S., & Salas, E. (2009). What does nursing teamwork look like? A qualitative study. *Journal of Nursing Care Quality*, 24(4), 298-307.

What does nursing teamwork look like?

- 34 focus groups
- Substantiated that the Salas model of teamwork applies to inpatient nursing teams



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Salas Model: 8 behaviors

1. Team leadership
2. Team orientation
3. Mutual performance monitoring
4. Back up
5. Adaptability
6. Closed loop communication
7. Shared mental model
8. Mutual trust

Team Orientation

- Team's success takes precedence over individual's performance and desires
 - Part of everyone's job is to ensure that everyone on the team can and does get their work done in a quality way.
 - **Example comments when NOT present:**
 - Unit Secretary: *The nurses count the number of patients assigned to them at the beginning of the shift and they say 'You have 4 patients and I have 5, why is that?'*
 - NA: *The RN could put the patient on the bedpan in a minute but instead spends 10 minutes looking all over the unit for me to do it.*

Team Leadership

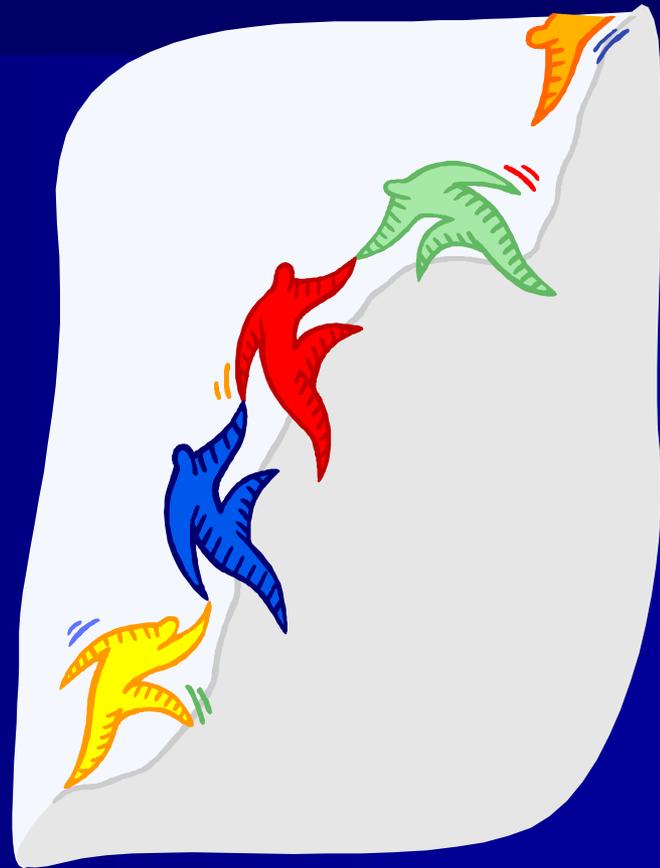
- Structure, direction and support provided]
- Who should be the team leader?
 - **Everyone** should act as a leader at some point.
- **Example comments when NOT present**
 - RN: *We all take turns being in charge so when I am in charge, I don't want to upset my fellow nurses because they will take it out on me the next time. I will wind up with all of the heaviest patients.*
 - NA: *I tell the RN a patient is in pain but she doesn't do anything. The next time I don't even try to get her to help the patient.*

Mutual Performance Monitoring

- The observation and awareness of team members of one another.
- Keep track of fellow team members' work while completing their own work.
- **Example comment when NOT present**
 - RN: *I don't think the NA takes accurate vital signs but I don't have time to recheck her work. I have too much to do with my work. I take what she gives me. It turned out to be a disaster last week—a patient had a BP of 200 over 165.*

Back-Up

- Team members help one another with their tasks and responsibilities including giving feedback.
- Example comment when ***NOT*** present
 - RN: *I will see a another nurse forget to wash her hands but I won't say anything.*



Adaptability

- Ability to adjust strategies and resource allocation.
- Examples when NOT present
 - RN: *We have staff on both 8- and 12-hour shifts and instead of reassigning patients so the nurse coming on doesn't have patients on all three wings, we let her run.*
 - RN: *When an NA calls in, we divide the patients between the 2 NAs left, no matter how many patients there are. No one thinks to look at the total load of RNs and NAs.*

Closed Loop Communication

- The active exchange of information between two or more team members where both parties have the same understanding of what was communicated (closed loop).
- Example when NOT present:
 - RN: *You send an order to pharmacy and just pray the med will appear. It doesn't matter that I didn't get the med, I get blamed because the patient didn't get their med.*

Shared Mental Models

What people use to organize information about the environment, the team purpose and team interdependencies.

Example when NOT present:

- RN: *A nurse floated to our unit and did things the way they do on her floor. She thought the other staff members would give her patients their medications when she took a break. She found out several hours later this was not the case.*

Mutual Trust

- Confidence that team members will complete their responsibilities.
- Without trust, team members expend time and energy protecting, checking and inspecting each other as opposed to collaborating.
- Examples when NOT present:
 - RN: *If I work with certain people, I am afraid things are not being done.*
 - RN: *I would like to believe the aide when she tells me she ambulated the patient, but I am not sure.*

Kalisch, B. & Lee, K. (2010). The impact of the level of nursing teamwork on the amount of missed nursing care. *Nursing Outlook*. 58(5), 233-241.

***Does
teamwork
predict
missed
nursing care?***

Controlling for occupation of staff members (e.g., RN/LPN, NA) and staff characteristics (e.g., education, shift worked, experience, etc), **teamwork alone** accounted for about **11% of missed nursing care.**

Kalisch, B. and Lee, K. (2013).
Variations of nursing teamwork by
hospital, patient unit, and staff
characteristics. *Applied Nursing
Research* 26(1). 2-9.

How does nursing teamwork vary by hospital, patient unit and staff?

- Type of unit
 - Highest: psychiatric, perioperative
 - Next: ICU, pediatric, maternity units next;
 - Lowest: Medical-surgical, intermediate, rehab, ED
- Shifts
 - **Full time less teamwork** than part time.
 - **Nights more teamwork** than days, evenings
- Staffing

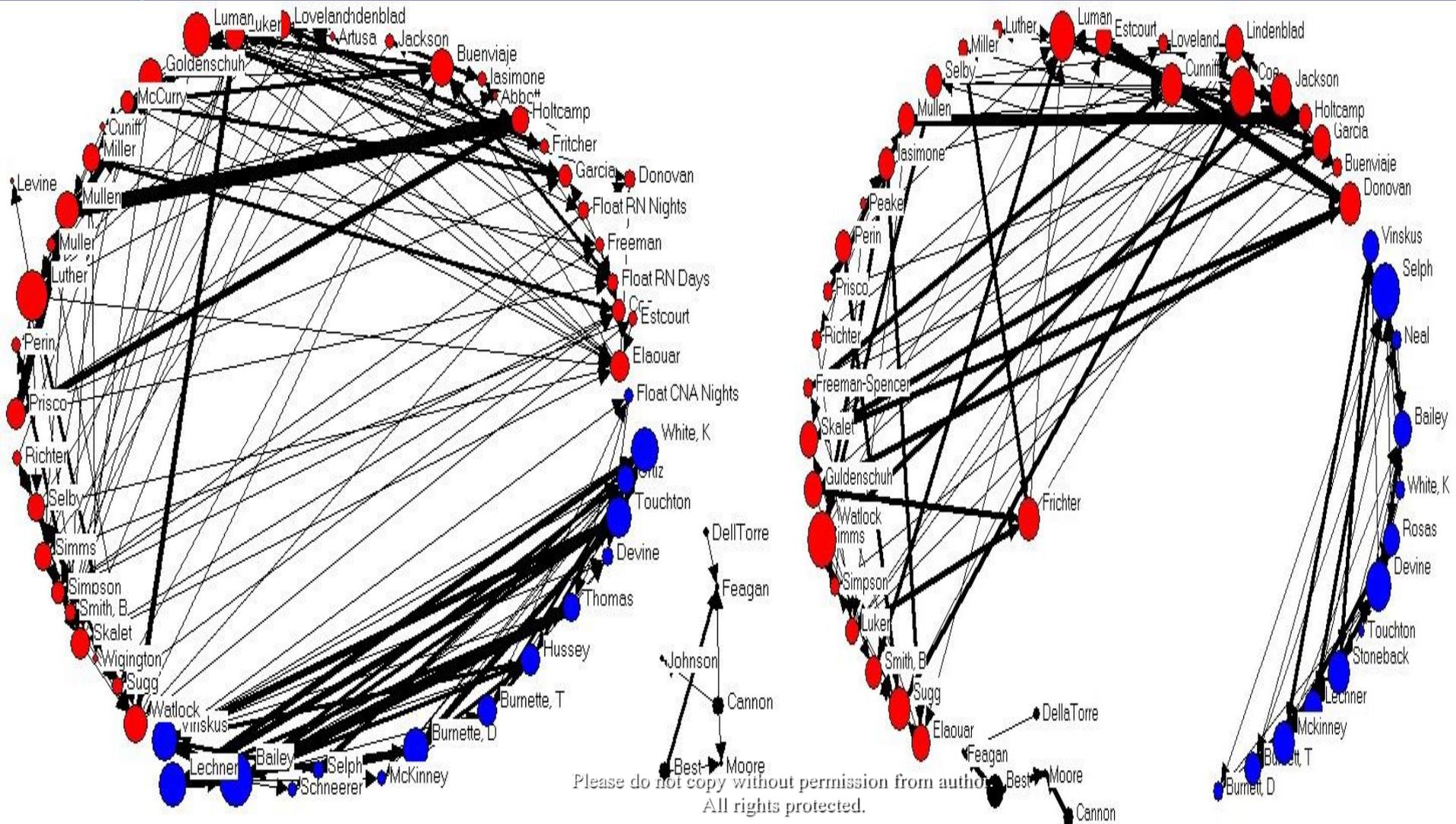
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Kalisch, B., Russell, K. and Lee, K. (2013). Nursing teamwork and unit size. *Western Journal of Nursing Research*. 35 (1).

How does nursing teamwork vary with the size of patient units?

- n=2,265; 53 units 4 hospitals
- The larger the unit, the less the nursing teamwork

SHIFT REPORTS



Kalisch, B., Lee, H., and Rochman, M. (2010). Nursing staff teamwork and job satisfaction. *Journal of Nursing Management*, 18, 938-947.

Does nursing teamwork predict job satisfaction & occupation satisfaction?

Satisfaction with position

- The more satisfied with current position, the higher the teamwork score ($F[4, 212.727] = 113.256, p < 0.001$)

Satisfaction with occupation

- The more satisfied with being nurse (or attendant), the higher the teamwork score ($F[4, 3699] = 30.709, p < 0.001$)

Planning to leave position

- The more likely to leave, the lower the teamwork score ($F[2, 541.891] = 25.475, p < 0.001$)



STRATEGIES TO REDUCE MISSED NURSING CARE and INCREASE TEAMWORK

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SOLUTIONS

- Staffing
- Culture and leadership
- Teamwork
- Patient engagement
- Technology
- Systems approach
- Measurement
- Unit design

Kalisch, B. and Lee, K. (2011).
Nurse staffing levels and
teamwork: A cross sectional study
of patient care units in acute care
hospitals. *Journal of Nursing
Scholarship*, 43(1): 82-88.

Do nurse staffing levels pre- dict nurs- ing team- work?

- Nurses taking care of **fewer patients** rated teamwork higher
- The more staff perceived their **staffing as adequate**, the higher teamwork
- HPPD and skill mix significantly associated with teamwork
- After controlling for CMI and bed size, the **higher the HPPD, the higher the teamwork** ($\beta=.417, p=.033$)
- **The higher the skill mix, the higher the teamwork** ($\beta=.436, p=.009$)
- Overall model accounted for 33.1% of the variation in teamwork ($p=.003$).

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Culture and leadership solutions

"Culture is everything"

- Focus on prevention, not punishment
 - Build a *culture of safety* and move beyond the culture of blame
 - Acknowledge that missed care occur
- Focus on team culture
- Need **open dialogue** supported by management
- Support of safe practices such as structured protocols (do not interrupt med administration; standardized communication processes, etc.)

**Organization-wide accountability
needs to be a cultural norm.**

'No innocent bystander' culture

A survey by the Institute of Safe Medication Practices found that "40% of clinicians have kept quiet or remained passive during patient care events rather than question a known intimidator"
(Joint Commission)



Culture and leadership solutions (continued)

- Conduct strategic planning to create a safe, quality culture
- Transformational leadership (vs. transactional)

TEAMWORK



Aviation example: Which team made more mistakes?

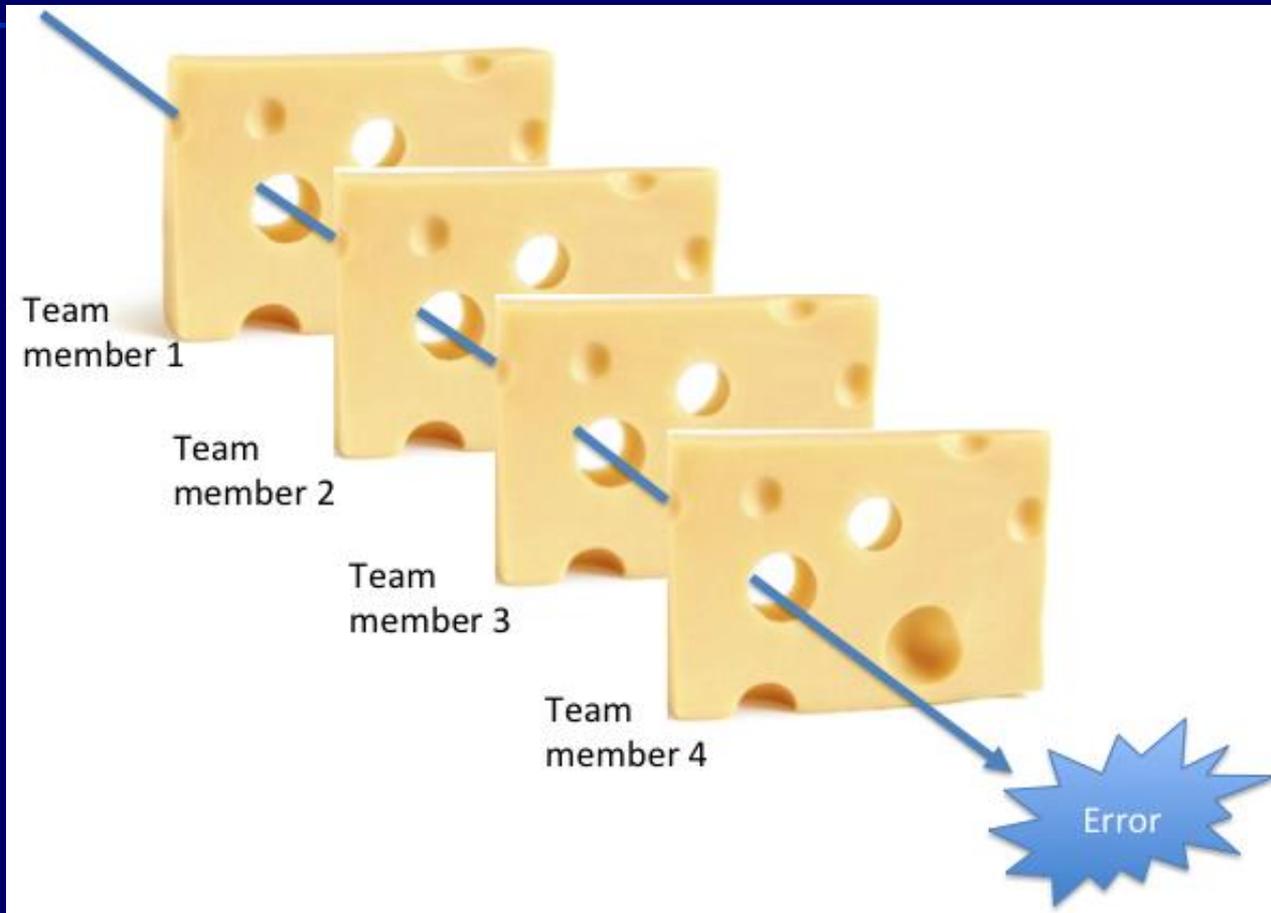
Team that worked together and tired



Team who did not work together and rested



Swiss Cheese Model



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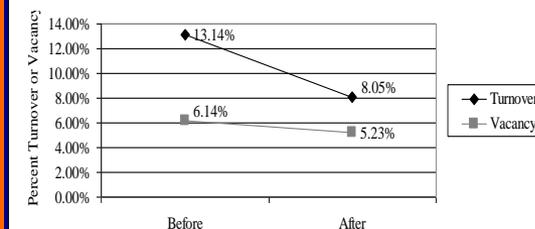
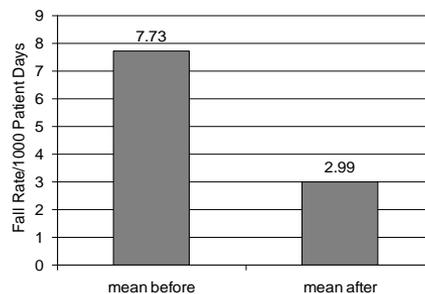
Impact of Teamwork on Safety and quality

- A systematic review of **28 studies** on the **impact of team processes on clinical performance** (e.g. fall rates, morbidity, mortality) revealed that “every study reported at least one significant relationship between team processes and performance” (Schmutz and Manser , 2013).

Kalisch, B., Curley, B. and Stefanov, S. (2007). An intervention to enhance nursing teamwork and engagement. *Journal of Nursing Administration*, 37(2): 77-84.

Is an intervention to increase nursing teamwork & engagement effective?

- 41 bed medical unit, 55 staff
- Measures
 - rate of patient falls
 - the staff's assessment of level of teamwork on their unit
 - vacancy and turnover rates



Kalisch, B., Xie, B. & Ronis, D. (2013) A train the trainer intervention to increase teamwork and decrease missed nursing care in acute care patient units. *Nursing Research*. 62(6), 405-413.

Teamwork **Tactics** ***intervention to increase teamwork and decrease missed nursing care***

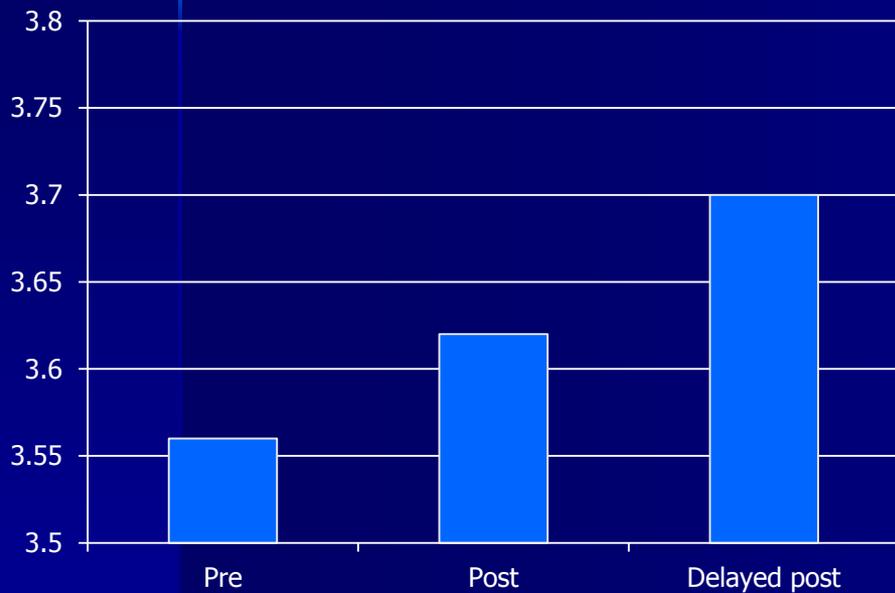
- Train the trainer (staff nurses 3 from each unit serve as trainers)
 - Each staff member received 3 one hour sessions during work hours on their units
- Role play scenarios typical of teamwork problems
 - Patient needs bedpan, asks RN, searches for nursing assistant
 - Day shift does not do the patient's bath and night shift staff resents it
- Debriefing
 - 8 elements of teamwork
 - What care is missed because of teamwork problems

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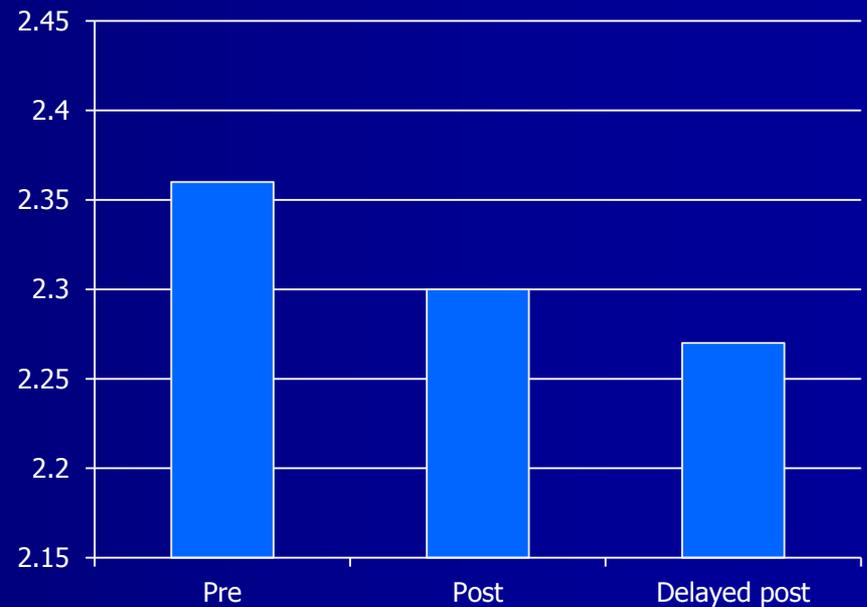
Study Findings

Does the Teamwork Tactics intervention increase nursing teamwork and decrease missed nursing care?

Overall Teamwork



Missed Care



Critical success factors: *Teamwork Tactics*

- On-going presence of the trainers on unit
- Short repeated training sessions
- 3 one hour sessions allowing for reinforcement of the teamwork behaviors and thus retention
- Real life scenarios that regularly occur on inpatient units with nursing teams --training more relevant and make the transfer of the training from classroom to workplace easier.

Critical success factors: *Teamwork Tactics* (continued)

- The use of roleplaying (simulation) resulted in
 - a higher level of engagement of the trainees
 - more personal involvement in their learning
 - reduced hierarchical levels (RN, NA)
- Training took place in small groups (4 to 6 staff members) greater involvement

**Team
training is
essential
but not
enough**



- The best team training will not yield the desired outcomes **alone** unless the organization is aligned to support teamwork.
- Team training accounts for 20% of the team performance variance
- 80% other organizational systems

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Patient and family engagement solutions

- Liberal visitation
- Interdisciplinary rounds at the bedside
- Including family members in rounds
- Permitting patients' to read and write on their own healthcare record
- Change of shift report at the patients' bedside
- Putting patient advocate on the care team
- Patient councils and committee memberships

Unit Design

- Smaller units
- Space for team communication



Systems solutions

- Humans are viewed as fallible and errors can occur, even in good organizations (Reason, 2000)
 - Ask: “Why did it happen”
- └ Use Human Factors Principles
 - e.g. Avoid reliance on memory, simplify
 - standardize, protocols and checklists

Technology Solutions (continued)

- Electronic reminders
- Mobile technology
- Wearable technology
- Co-browsing
- Desktop sharing
- White boarding
- Group decision support
- Video conferencing
- Tracking devices (e.g. hand washing)

Measurement

You get what you measure!

*You cannot use information
you do not have.*

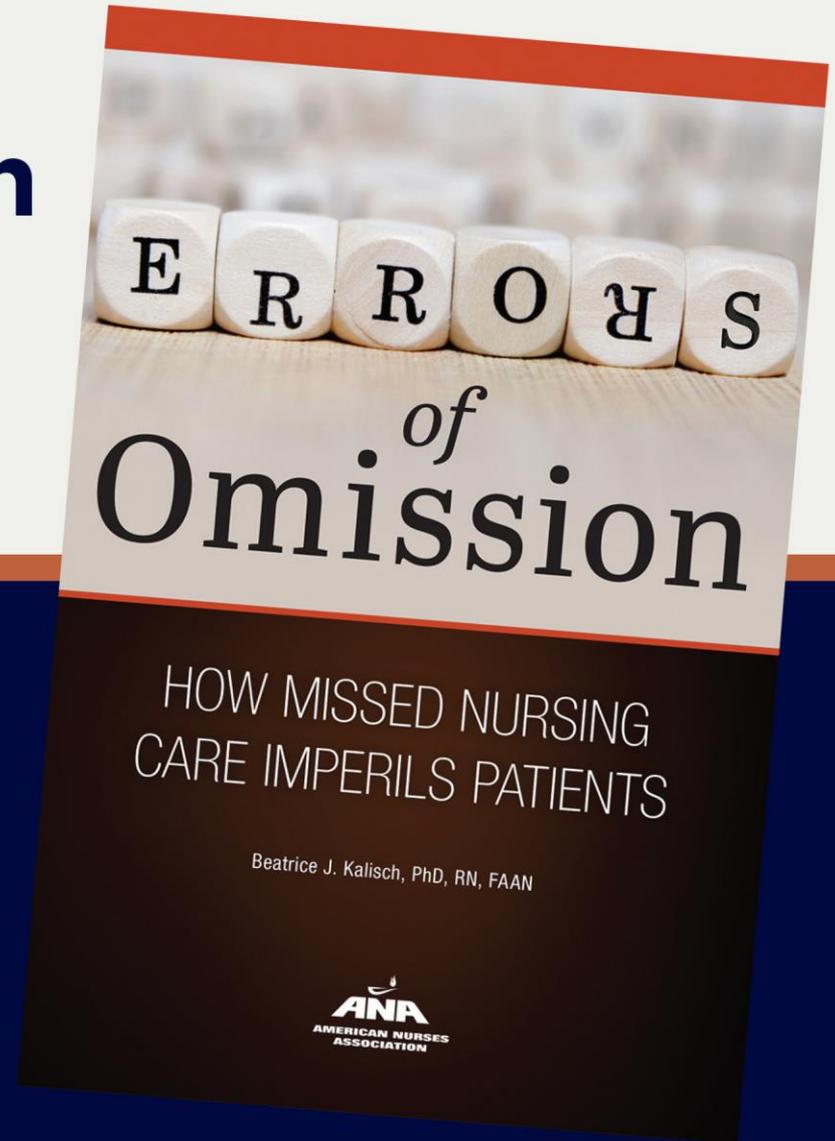
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How Missed Nursing Care Imperils Patients



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