

Errors of Omission: Missed Nursing Care

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Abstract

A series of studies on missed nursing care (i.e., required standard nursing care that is not completed) is summarized. Missed nursing care is substantial and similar levels are found across hospitals. Reasons for missed nursing care are staffing resources, material resources, and communication and these are also similar across hospitals. The higher the staffing levels, the fewer occurrences of missed nursing care. Magnet status and higher levels of teamwork are associated with less missed nursing care, and more missed care leads to a lower level of staff satisfaction. Missed nursing care has been found to be a mediator between staffing levels and patient falls. Patient identified missed nursing care predicts adverse events (i.e., falls, pressure ulcers, new infections etc.).

Keywords

nurses, nurses as subjects, systems/management/leadership, acute care, location of care

Ensuring quality nursing care and patient safety is a major challenge facing nurses and nurse leaders today. Worldwide, there is a recognition that patient errors occur with regularity. Patient errors can be either an act of commission (doing something wrong such as administering an incorrect medication), or an act of omission (failing to do the right thing such as not ambulating a

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patient) that leads to an adverse outcome or has significant potential for such an outcome (Reason, 1990). According to the Agency for Healthcare Research and Quality (AHRQ; 2007), “errors of omission are more difficult to recognize than errors of commission but likely represent a larger problem.”

Missed nursing care was first studied in 2006. In this study, focus group interviews were conducted in two hospitals (Kalisch, 2006). A total of 107 registered nurses (RNs), 15 licensed practical nurses (LPNs), and 51 nursing assistants (NAs) working in medical-surgical patient care units were interviewed in 25 focus groups. Nine elements of regularly missed nursing care (ambulation, turning, delayed or missed feedings, patient teaching, discharge planning, emotional support, hygiene, intake and output documentation, and surveillance) and seven themes relative to the reasons for missing this care (too few staff, time required for a nursing intervention, poor use of existing staff resources, “not my job” syndrome, ineffective delegation, habit, and denial) were uncovered in this study. Subsequent to this investigation, we conducted a number of studies in the structural process and outcome variables as they relate to missed nursing care. These will be summarized in this article along with studies testing interventions to decrease missed nursing care.

Purpose

The purpose of this article is to provide a comprehensive review of the findings of the research completed on missed nursing care to date and to identify further research that is needed on this topic.

Concept Analysis

Based on this qualitative study (Kalisch, 2006), a concept analysis of missed care was conducted to clarify what missed care refers to and how it differs from other related concepts (Kalisch, Landstrom, & Hinshaw, 2009). Walker and Avant’s (2005) steps in developing a concept analysis were utilized: selecting the concept, determining the purpose, identifying the uses and attributes, identifying a model case, describing contrary cases, identifying antecedents and consequences, and finally, defining empirical referents. The missed nursing care concept was developed to illustrate the various attribute categories reported by nurses that contribute to missed nursing care. The attributes include (a) antecedents within the care environment that facilitate or inhibit the practice of nursing (labor resources, material resources and relationships, and communication); (b) elements of the nursing process; (c) internal nurse perceptions and decision processes (e.g., values, beliefs,

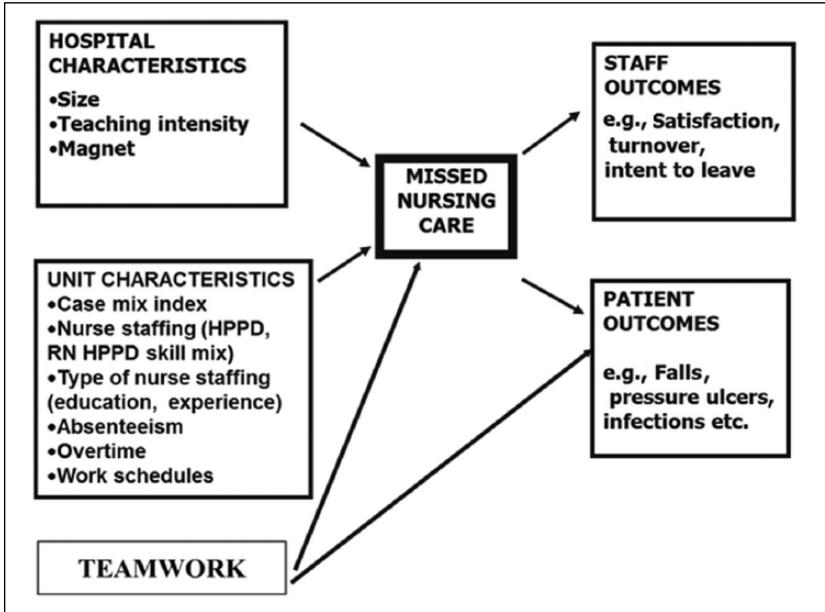


Figure 1. The missed nursing care model.
Note. HPPD = hours per patient day; RN = registered nurse.

habits, etc.); (d) care that is provided as planned and care that is delayed or omitted (missed nursing care); and (e) patient outcomes.

The antecedents of missed nursing care that influence the conduct of the nursing process are influenced by the internal processes of the nurse, and the consequences of missed nursing care are threats to patient safety. Missed nursing care is defined as any aspect of required patient care that is omitted (either in part or in whole) or delayed (Kalisch, Landstrom, & Hinshaw, 2009).

Theoretical Framework

The *Missed Nursing Care Model* (Figure 1) served as a conceptual framework for our studies. This framework, based on Donabedian’s structure, process, and outcome model, contains three concepts: structure (e.g., hospital, patient care unit, and individual nursing staff characteristics, teamwork), process (missed nursing care), and outcomes (staff outcomes, including job satisfaction with current position and with occupation, and patient outcomes, such as patient falls, infection rates, and pressure ulcer prevalence; Donabedian, 1988).

Quantitative Tool

To be able to measure the concept of the amount and type of missed nursing care and the reasons for missed care quantitatively, the *MISSCARE Survey* was developed. The *MISSCARE Survey* is a four-point Likert-type scale with 19 items in part A (elements of nursing care) and 17 items in part B (reasons for missing nursing care). In part A, RNs were asked to identify how frequently elements of nursing care were missed (e.g., ambulation three times a day, on-time medication administration, repositioning and turning, patient assessment, intravenous (IV) site care, patient education, etc.). The responses were made on a Likert-type scale from *never* or *rarely missed* to *always missed*. In part B, RNs identified the reasons why nursing care was missed using anchors *not a reason* to *significant reason*.

The psychometric testing of the *MISSCARE Survey* showed that acceptability was high, with 85% of the respondents answering all items on the survey. Factor analysis with Varimax rotation resulted in a three-factor solution for part B (communication, staffing resources, and material resources). Cronbach's α values ranged from .64 to .86. Confirmatory factor analysis demonstrated a good fit of the data (Comparative Fit Index [CFI] = 0.89; root mean square error of approximation [RMSEA] = 0.054; Incremental Fit Index [IFI] = 0.90; Tucker-Lewis Index [TLI] = 0.85). Using a contrasting group approach, a comparison of nurse's perceptions of missed care on intensive care units versus rehabilitation units resulted, as hypothesized, in a significantly lower amount of missed care in intensive care units. Pearson correlation coefficient on a test-retest of the same subjects yielded a value of .87 on part A and .86 on part B, indicating a stable reliable measure. The interclass correlation for all three subscales for part B of the tool was statistically significant, indicating consistency in nurses' ratings as to the reasons for missed care (Kalisch & Williams, 2009).

Studies of Missed Nursing Care

After the development of the *MISSCARE Survey*, a series of studies was conducted to examine the extent and type of missed nursing care and reasons nursing care was missed. The first study was conducted with a sample of 459 nurses working in intensive care, intermediate care, cardiac, surgical, medical, renal, oncology, and rehabilitation in three hospitals. The results of this study show a significant amount of missed nursing care (Kalisch, Landstrom, & Williams, 2009). The six most frequently missed items of care were ambulation (84%), assessing the effectiveness of medications (83%), turning (82%), mouth care (82%), patient teaching (80%), and the timeliness of Pro re nata (PRN) medication administration (80%). The least missed care fell into the

assessment category, namely, patient assessments performed each shift (17% missed) and bedside glucose monitoring (26% missed). Reasons for missed care were labor resources (85%), material resources (56%), and communication (38%). A comparison of the hospitals showed consistency across all three hospitals as to the extent and type of missed nursing care and reasons.

Following this study, an investigation involving a much larger sample of diverse hospitals were conducted in the Midwest and Western regions of the United States (Kalisch, Tschannen, Lee, & Friese, 2011). A total of 3,143 RNs and 943 NAs who provided direct patient care in ($n = 110$) medical, surgical, rehabilitation, intermediate, and intensive care units in 10 hospitals participated in the study. The findings revealed that missed nursing care was common across all hospitals, and the trends in frequency and types of missed care were similar across these hospitals. Ambulation of patients three times per day (or as ordered) was the most frequently reported element of missed care, with 32.7% of nurses indicating that this care is frequently or always missed. Additional elements that included attendance at care conferences (31.8%), mouth care (25.5%), medications administered within 30 min before or after scheduled time (17.6%), and turning patient every 2 hr (15.1%). Conversely, shift patient assessments (97.7%), glucose monitoring (97.6%), and vital signs (95.8%) were reported as only rarely or occasionally missed. The least and the most missed nursing care were similar across all 10 hospitals. As to the reasons for missed nursing care, inadequate labor resources was the most often reported reason for missed nursing care (93.1% across the 10 hospitals), followed by material resources (89.6%) and communication/teamwork (81.7%). These findings were consistent with the prior study.

Furthermore, this study determined the predictive ability of certain unit and staff characteristics to the amount of missed nursing care. Job title, shift worked, years of experience in the role, absenteeism, perceived level of adequate staffing, and the number of patients cared for were significantly associated with missed nursing care. Unregulated NAs (vs. RNs) and staff with fewer years of experience reported significantly less missed care ($p < .001$). Night-shift staff reported less missed care than day-shift workers ($p < .01$). Nursing staff who missed two or more shifts in the past 3 months reported more missed care than those who did not miss any shifts ($p < .01$). Age and gender of the nursing staff were not significantly associated with the amount and type of missed care.

Comparison Between Magnet and Non-Magnet Hospitals

Magnet hospitals are considered to have a good environment for practice of nursing and are believed to offer a higher quality of nursing care. We

conducted a study to examine this premise by comparing the amount, type, and reasons for missed nursing care at Magnet and non-Magnet hospitals (Kalisch & Lee, 2012b). The study was conducted in 124 medical-surgical, intermediate, intensive care, and rehabilitation units in 11 hospitals located in the Midwest and Western regions of the United States, of which 62 (50%) were Magnet hospital units and the rest were non-Magnet hospital units. The findings revealed that Magnet unit staff reported significantly less overall missed nursing care than staff in non-Magnet hospital ($t = 2.20, p = .03$). Turning, feeding, meal set-up, full documentation, patient teaching, mouth care, IV/central line site care, call-light response, medication effectiveness assessment, and skin/wound care were completed more often in Magnet than non-Magnet hospitals. Moreover, nursing staff in Magnet hospitals reported fewer problems with communication and staffing resources than did those working in non-Magnet hospitals. A comparison of staffing levels in these two types of hospitals showed no differences. It suggests that organization/unit culture and other practices account for the difference in quality of care.

Missed Nursing Care and Staffing

Although the association between staffing levels and patient outcomes has been well established, few studies have focused on how the nursing process (e.g., missed nursing care) is associated with staffing levels and type. A study using a cross-sectional descriptive design was conducted to examine whether actual nurse staffing predicts missed nursing care after controlling for other unit characteristics (Kalisch, Tschannen, & Lee, 2011b). Actual staffing data (hours per patient day [HPPD], RN HPPD, and skill mix) and unit level case mix index were collected from the participating hospitals. Multiple regression analysis showed that HPPD, experience, absenteeism, and case mix index were significantly associated with missed nursing care. HPPD was a significant predictor of missed nursing care. The greater the HPPD, the lower the level of missed nursing care. The findings in this study highlighted the importance of adequate nurse staffing levels to ensure that required nursing care is provided to patients.

In addition to HPPD, two other measures of staffing were collected—the number of patients cared for on the previous shift and perceptions of staffing adequacy (Kalisch, Friese, Choi, & Rochman, 2011). Those who cared for more patients reported more missed nursing care ($p < .001$). Similarly, nursing staff who perceived their staffing as adequate for a greater percentage of time reported less missed nursing care ($p < .001$).

Missed Nursing Care and Staff Outcomes

The nursing shortage is a critical worldwide problem. Attracting and retaining nurses is vital for maintaining quality patient care. To understand the relationship between missed nursing care and job satisfaction, a cross-sectional study was conducted (Kalisch, Tschannen, & Lee, 2011a). Nursing staff members who identified less missed nursing care were more satisfied in their current position and occupation.

In another study, the relationship between missed nursing care, nurse turnover, and intention to leave was examined (Tschannen, Kalisch, & Lee, 2010). The findings from this study revealed that gender was the only significant predictor of turnover. A higher percentage of females in the unit was associated with lower turnover rates. For the outcome of intention to leave, missed care, age, overtime, and absenteeism were significant predictors. Specifically, units with higher rates of missed care and absenteeism had more staff with plans to leave, whereas units with more staff nurses working overtime and more than 35 years of age were less likely to have staff with intention to leave. Turnover showed no differences; however, data were collected during the recession and nurses were not retiring as they had planned.

Missed Nursing Care and Patient Outcomes

Prevention of patient falls during hospitalization continues to be a major concern. Understanding the factors related to patients falls is important for the development of interventions to prevent patient falls. We conducted a cross-sectional study to test the mediating effect of missed nursing care on the relationship between staffing levels and patient falls (Kalisch, Tschannen, & Lee, 2012). Three regression equations were established: Equation 1 showed that HPPD was a significant predictor of missed nursing care and explained 6.7% of variance in missed nursing care; Equation 2 showed HPPD was a significant predictor of patient falls and explained 13% of the variance in patient falls; Equation 3 showed both missed nursing care and HPPD were significant predictors of patient falls, whereas the variance of patient falls accounted for HPPD was reduced to 8.3%. Hence, these findings indicated missed nursing care mediates the relationship between staffing levels and patient falls. The results showed that HPPD or the level of nurse staffing was negatively associated with patient falls and the higher missed nursing care was associated with a greater risk of patient falls.

Missed Nursing Care and Teamwork

Studies have shown the importance of teamwork in the delivery of safe and quality health care (Beckett & Kipnis, 2009; Bellack & O'Neil, 2000; Clark, Squire, Heyme, Mickle, & Petrie, 2009; Kaissi, Johnson, & Krischbaum, 2003; Kalisch, Curley, & Stefanov, 2007; Kalisch & Lee, 2009; Leonard, Graham, & Bonacum, 2004; Leppa, 1996; Morey et al., 2002). The Institute of Medicine, in its 1999 groundbreaking report, *To Err Is Human: Building a Safer Health System*, cited a lack of teamwork as one of the causes of the preventable errors that led to approximately 98,000 patient deaths annually (Kohn, Corrigan, & Donaldson, 2000).

To determine whether teamwork impacts the amount of missed nursing care, we identified from our previous studies the top five patient care units with the most and least missed nursing care (Kalisch, Gosselin, & Choi, 2012) and conducted a qualitative study to gain a greater understanding of what leads to missed nursing care. Ten themes were identified: (a) staffing levels, (b) communication, (c) collective orientation, (d) backup, (e) monitoring, (f) leadership, (g) long tenure, (h) unit size, (i) trust, and (j) accountability. Taken together, the predominant difference found was that units with the least missed care had higher teamwork. Hence, this implicates that increases in teamwork plays an important role in decreases in missed nursing care.

The next step was to develop an instrument to measure the level of nursing teamwork in acute care hospitals. The instrument, *Nursing Teamwork Survey* (NTS), was developed guided by the Salas teamwork model. A qualitative study from 34 focus groups were conducted to verify that Salas teamwork model (Salas, Sims, & Burke, 2005) can be used to capture and describe teamwork among nursing team and the item pool was generated based on this qualitative study (Kalisch, Weaver, & Salas, 2009). The following step was to develop and conduct psychometric testing of the NTS with the sample size of 1,758 nursing staffing members. The NTS is a 33-item five-point Likert-type scale (1 = rarely, 2 = 25% of the time, 3 = 50% of the time, 4 = 75% of the time, and 5 = always), including five subscales of trust (i.e., shared perception that members will perform actions necessary to reach interdependent goals and act in the interest of the team), team orientation (i.e., cohesiveness, individuals see the team's success as taking precedence over individual needs and performance), backup (i.e., helping one another with their tasks and responsibilities), shared mental models (i.e., mutual conceptualizations of the task, roles, strengths/weaknesses, and processes and strategy necessary to attain interdependent goals) and team leadership (i.e., structure, direction, and support provided by the formal leader or the other members of the team, or both). Exploratory Factor Analysis produced a five-factor solution and these five

factors explained 53.11% of the variance. Confirmatory factor analysis confirmed the factor structure (CFI = 0.88, RMSEA = 0.06, standardized root mean square residual = 0.05). The test–retest reliability was .92. The internal consistency coefficient was .94, and the alpha for the subscales ranged from .74 to .85 (Kalisch, Lee, & Salas, 2010).

We then conducted a study administering The MISSCARE Survey and the NTS to nursing staff on 50 patient care units in four hospitals ($n = 2,216$). The results of this study showed that the higher the overall teamwork and the higher the trust, team orientation, backup, shared mental models, and team leadership, the less the missed nursing care. The regression model revealed that overall teamwork was a significant predictor of missed nursing care and accounted for 11% of the variance in missed nursing care (Kalisch & Lee, 2010).

RNs Versus NAs

Understanding the differences in perceptions of missed nursing care among nursing staff with different job titles are essential for the improvements of nursing teamwork and quality of patient care. Using a mixed-method approach, we examined the differences in amount of and reasons for missed nursing care between RNs and NAs. The results showed that RNs reported significantly more missed care than NAs. RNs felt that nursing care activities typically completed by the NA and shared with the NAs were missed more than the NAs determined they were left undone. Staff/labor resources were the greatest reason for missed care by both RNs and NAs, followed by material resources and communication. The focus group results uncovered a lack of essential elements of teamwork (i.e., closed-loop communication, mutual trust, leadership, team orientation, and shared mental models between the RNs and NAs; Kalisch, 2009).

In another study, we tested the congruence of the perceptions of unit-based nurse leaders and nursing staff members to the extent and type of missed nursing care and nursing teamwork. The findings showed a lack of leader–member exchange congruence between leaders and nursing staff members. Nursing staff reported less missed care and lower teamwork than did leaders, and nursing staff listed more problems with having adequate material and labor resources than did leaders (Kalisch & Lee, 2012a).

Patient Perceptions of Missed Nursing Care

We expanded our work to the measurement of patients' assessments of care they received (or not). The first step was to determine what aspects of nursing

care patients could report on. In-depth, semi-structured interviews were conducted with 39 patients that revealed three categories of nursing care—fully reportable, partially reportable, and not reportable (Kalisch, McLaughlin, & Dabney, 2012). Fully reportable areas of nursing care included mouth care, listening, being kept informed, response to call lights, response to alarms, meal assistance, pain medication and follow-up, and bathing. Partially reportable items included ambulation, discharge planning, patient education, medication administration, repositioning, vital signs, and hand washing. Finally, items they could not report on included patient assessment, surveillance, and IV site care.

Based on the findings of this qualitative study, a quantitative instrument of patient perceptions of missed care, MISSCARE Survey–Patient, was developed and tested. This instrument contains three sections: (a) demographic characteristics and health status, (b) elements of nursing care, and (c) adverse events. The section of elements of nursing care contained 13 items and uses five-point Likert-type scales for measurement of communication and basic care (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *usually*, and 5 = *always*) and for timelines (1 = <5 min, 2 = 5-10 min, 3 = 11-20 min, 4 = 21-30 min, 5 = >30 min). The mean of all 13 items was used as a total score for the scale, ranging from 1 to 5. Higher scores indicated more missed nursing care. In the adverse events section, participants were asked the question, “Did you experience any of the following problems during this hospitalization?” Problems included falls, skin breakdown/pressure ulcers, medication errors, infections, and IV running dry or infiltrating.

Psychometric tests were conducted to test the reliability and validity of the survey. A total of 31 expert staff nurses and 48 patients reviewed the final survey and rated the clarity and relevance of each of the questions. It showed that the Content Validity Index (CVI) for expert nursing staff was .89, and .88 for patients. These indicate that the survey has a high level of clarity and relevance. Exploratory factor analysis was performed to evaluate construct validity. A three-factor solution emerged: (a) communication (five items), (b) time to response (four items), and (c) basic care (four items). The factor loadings ranged from .605 to .869. These three factors explained 59.2% of the variance in patient perceptions of missed nursing care. The confirmatory factor analysis resulted in a good model fit (CFI = .969 and RMSEA = .058). The overall test–retest coefficient was .818. Internal consistency measured by Cronbach’s α coefficient was .838, and the subscale α ranged from .708 to .834.

This survey tool, the MISSCARE Survey–Patient, was utilized in a study of 729 patients in two hospitals (Kalisch, Xie, & Dabney, in press). The findings revealed patients reported more missed nursing care in the domain of basic care than in communication or in time to respond. The five most

frequently reported specific elements of missed care were the following: (a) mouth care, (b) ambulation, (c) getting out of bed into a chair, (d) not giving information about tests/procedures, and (e) bathing. The five least missed elements of nursing care were (a) not listening to patients' questions and concerns, (b) not answering call lights, (c) not responding to beeping monitor, (d) requests not fulfilled, and (e) not being helped to the bathroom. The results also revealed that patients with higher education, who had a poorer health status, and who had been diagnosed or treated for a psychiatric problem reported more missed nursing care.

Adverse events were correlated with the amount of missed nursing care as reported by patients (Kalisch, Xie, & Dabney, in press). Patients who experienced skin breakdown/pressure ulcer, medication errors, new infections, IV running dry, IV infiltrating, and other problems reported significantly more overall missed nursing care as well as more missed communication and timeliness. Patients reported more missed basic care if they experienced the adverse events of medication errors, new infection, IV running dry, and IV infiltrating.

Missed Nursing Care in Other Countries

Studies in other countries are showing similar levels of missed nursing care. A study using MISSCARE Survey–Turkish found that even though Turkey had less missed care compared with United States, the elements of care missed the most were similar in both countries (Kalisch, Terzioglu, & Duygulu, 2012). Ambulation, feeding patient while food is warm, and turning were in the top five most missed in both countries. In addition, a study in Lebanon also showed a substantial amount of missed nursing care and inadequate staffing resources as the reason for missing care most frequently reported by Lebanese nurses (Kalisch, Doumit, Lee, & Zein, 2013).

A similar concept, rationing of nursing care, defined as the withholding of or failure to carry out all needed nursing interventions has been studied (Schubert, Glass, Clarke, Schaffet-Witvliet, & DeGeest, 2007). Schubert and colleagues examined the levels of implicit rationing of nursing care in Swiss acute care hospitals and found that 98% of participants had to ration at least one of the listed nursing tasks and adequacy of unit level staff resources and hospital level safety climate were significantly associated with rationing levels (Schubert, Ausserhofer, & Desmedt, 2013). Moreover, implicit rationing of nursing care was significantly associated with adverse patient outcomes (i.e., nosocomial infections, pressure ulcers, and patient satisfaction; Schubert, Clarke, Glass, Schaffet-Witvliet, & Geest, 2009; Schubert et al., 2008).

Interventions to Decreased Missed Nursing Care

To decrease missed nursing care and enhance nursing teamwork, we conducted a quasi-experimental study examining the impact of a train-the-trainer intervention on the level of and satisfaction with nursing teamwork and the amount of missed nursing care. A total of 242 nursing staff members from three medical-surgical units in three Midwest acute care hospitals (one unit in each hospital) participated in the study. Three RNs from each unit were selected to be trainers (2 from day/evening shifts and 1 from the night shift). They participated in a 2-day training program to prepare them train the staff of their own units held in three 1-hour long sessions, with three to five staff members per group. The training took place in the patient units with coverage from managers, educators, and clinicians to allow nursing staff to participate in the training during work hours. The training materials consisted of didactic presentations, scenarios including role playing, debriefing, and discussion. The measures for this study were the NTS and the MISSCARE Survey before the training, after the training, and 2 months later. The mixed model analysis showed teamwork increased ($F = 6.91$, $df = 259.01$, $p = .001$) and missed care decreased ($F = 3.59$, $df = 251.29$, $p = .029$) over time. Nursing staff also reported a higher level of satisfaction with teamwork and an increase of teamwork knowledge after the intervention (Kalisch, Xie, & Ronis, 2013).

The use of electronic nursing care reminders was tested as a potential strategy to reduce missed nursing care (Piscotty, 2013). A descriptive study was conducted to examine the relationship between nurses' level of use of electronic reminders and missed nursing care using a sample of 165 staff nurses working in medical-surgical, intensive care, and intermediate care units. The study uncovered a significant negative relationship between nursing care reminder usage and missed nursing care, and between missed nursing care and the impact of health information technology (HIT). Moreover, the impact of HIT was a mediator in the relationship between nursing care reminders and missed nursing care.

Discussion

Our studies demonstrated that a large amount of nursing care is being missed in acute care hospitals in the United States and selected other countries. Not providing the nursing care has a negative impact on the quality of care. For example, not ambulating patients has been shown to result in new onset of delirium, pneumonia, delayed wound healing, pressure ulcers, increased length of stay, delayed discharge, increased pain and discomfort, and fatigue and physical disability (Kalisch, Lee, & Dabney, in press). Missing mouth

care leads to a reluctance to eat which in turn impacts risk of pressure, ulcer development, and/or pneumonia, particularly in ventilated patients.

Our series of studies confirmed the hypotheses based on Missed Nursing Care Model. The structure variables of hospitals and patient care units within hospitals are predictive of missed nursing care. Increases in missed care leads to poor patient outcomes (i.e., falls) and higher staff outcomes (i.e., greater staff satisfaction, decreased intent to leave).

Future Research Agenda

Further research on missed nursing care is important. First staffing studies are needed to determine more precisely the level and type of staffing, which results in less missed nursing care. In this era of hospital cost containment, staffing resources must be managed effectively. For example, how could additional staffing resources be added to deal with the crisis or heavy workload times when there are many admissions and discharges or patients decline suddenly? Also, what is the appropriate mix of roles for nursing staff? For example, in a unit where patients are time-consuming to ambulate, perhaps more NAs are needed. Some hospitals have implemented a specialized role such as ambulation aide or turning and mouth care assistant who spend their entire shift going from patient to patient performing these activities.

Another important area of research that needs to be furthered is whether missed care leads to adverse patient outcomes (e.g., pressure ulcers, infection rates, falls with injury, etc.). Because adverse events are relatively rare in occurrence and are typically measured at the patient unit level in acute care hospitals, a large sample of patient units will be required for these investigations.

We also need to conduct studies that measure the cost of *not* providing nursing care. For example, not ambulating patients could lead to a need for posthospitalization physical therapy to regain functioning. Not washing hands could result in infections that take months of recovery.

We need studies which further demonstrate that higher teamwork, achieving Magnet status, and using information and other technologies can reduce missed nursing care. Innovative approaches need to be developed and tested. Engagement of patients and families in nursing care needs to be explored. The Joint Commission's project to involve patients in reminding staff to wash their hands is one example of such an intervention. Of primary importance are studies of organization culture that promotes safety and quality of care.

The importance of not missing nursing care is evident to nurses but not always to other administrators or the public. Highlighting this problem, as was done with the patient safety movement in general, could lead to greater attention and better solutions.

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