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Full Length Research Paper

An evaluation of the prevalence of non-staff visitor presence in acute inpatient care settings

***Shen T. Youlan, Zhang Minhong and Kong Z. Xilia**

Department of Nursing, Faculty of Health Professions and Studies, China Medical University, Shenyang, China.

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A descriptive study was conducted to understand the prevalence of non-staff visitor presence in acute inpatient care settings. This paper also summarizes recent studies on the issues related to promoting efficient and effective care transitions and the recent movement of embracing family and non-family visitor involvement in patient care. This descriptive study was conducted in three inpatient care units of a Michigan hospital in April, 2007. A trained research assistant counted the number of visitors for each patient on two weekdays and two weekend days at three predetermined time points for each day. Descriptive analyses were used to answer the question of: What is the prevalence of visitor presence in a specific hospital in the Midwest United States? About 36% of the patients had at least one visitor present during their hospital stays. Among adult medical patients, about 22% of them had at least one visitor present. Among pediatric patients, about 59% of them had at least one visitor present during the hospital stays. A culture of non-staff visitor involvement in bedside care exists in the US hospital environment when a child is hospitalized, but this is not necessarily the case when an adult is hospitalized.

Key words: Hospitals, safety, patients, family, professional-family relations, nursing care.

INTRODUCTION

In 2010, a conversation regarding whether most of the nurses in the United States welcome involvement of non-staff visitors in bedside care during inpatient stays in acute hospitals arose during an undergraduate research course with Registered Nurse/Bachelor of Science in Nursing (RN/BSN) completion students. All but one of the students in this class was currently practicing in clinical settings. This course was offered by a public university located in southeastern Michigan. These RN/BSN students expressed the view that it is not a shared understanding among their colleagues in hospital settings that nurses may encourage visitors to participate in the care of their loved ones during hospitalizations. This participation can include staying with the patients overnight and offering an extra pair of eyes for the patients who are at high risk for falling or have an altered mental status. One female student, who is of Catholic-Irish descent, shared her experience with classmates. Two years ago, her 100 years old grandfather had two episodes of stroke 2 weeks apart. He was hospitalized in a local hospital and then at an acute rehabilitation center. She (the student) and other grandchildren, her parents, uncles, and aunts voluntarily took turns staying with him during the entire inpatient stay, 24 h a day, 7 days a week. She said it is her family's culture to do so and everyone was willing to help. However, she found that her grandfather's providers did not welcome their participation in the bedside care. She was really puzzled and wondered whether the existing hospital culture in the United States could be changed to welcome the involvement of visitors in bedside care.

Ironically, the family-unfriendly feelings resemble the negative attitudes of nurses toward families (e.g. family

*Corresponding author. E-mail: yshen1962@cmu.edu.cn

presence could increase nurses' workload and hinder patient care) in the report by Neil et al. (2010). Neil et al. (2010) emphasized that nurses need to embrace family presence, even during crises, as a way to keep families connected and to improve patients' clinical outcomes during hospital stays (e.g., reduced stress, improved mental status, better family education) and after being discharged (e.g., assisting families to envision what the patient will need when discharged). The American Nurses Association's (ANA) publications, "code of ethics for nurses with interpretive statements" (ANA, 2001) and "Nursing: Scope and standards of practice" (ANA, 2010), also emphasize that nursing practice in hospital settings, for example, should extend supportive care to patients' visitors or significant others, including individualizing the care services to meet the unique needs of the patients and their visitors.

According to Neil et al. (2010), hospital visitation policies vary from closed (that is, allowing brief visitors presence during certain times) to flexible (that is, allowing visitors presence at all times except certain predetermined hours) to open (that is, allowing visitors to come and go as they wish around the clock). To develop relevant hospital policies to encourage family and non-family visitor involvement in bedside patient care during hospitalization, an understanding of the prevalence of visitor presence in acute inpatient care settings is necessary.

Purpose of this paper

This paper aimed to understand the prevalence of non-staff visitor presence in acute inpatient care settings within a US hospital environment. This paper first summarizes recent studies on the issues related to promoting efficient and effective care transitions and the recent movement of embracing family and non-family visitor involvement in patient care, followed by a descriptive case study in a Michigan academic medical center. This case study was intended to enhance our understanding of the prevalence of non-staff visitor presence in three acute inpatient care settings within a US hospital environment. It was designed and conducted to answer a straightforward research question: What is the prevalence of visitor presence in a specific hospital in the Midwest United States?

BACKGROUND

Promoting efficient and effective care transitions

Patients with complex care needs who require care across different health care settings are vulnerable to experiencing inefficient or ineffective quality of care. To ensure the overall quality of the continuum of care, care transitions should be a priority area for performance measurement (Coleman et al., 2006). For example, inappropriate use of emergency care services is a concern in many countries because of hospital readmissions and related medical care costs. A study conducted in Berlin, Germany, found that the probability of a hospital admission following emergency care treatment increased with patient age (David et al., 2006).

According to the home health outcomes report for utilization outcomes by the Center for Medicare and Medicaid Services (2009), occurrences of emergency care visits (percentage of patients who have received emergency care before or at the time of discharge from home health care) and occurrences of rehospitalizations (percent of patients who are admitted to an acute care hospital for at least 24 h while a home health care patient) are two related indicators of quality home health care agencies, which may be named as two poor care transition signs. It seems logical to assume that having family present during hospital stays could be a way to promote effective and efficient care transitions and ensure the quality of the continuum of care by keeping families connected during hospital stays (Neil et al., 2010).

Previous studies have addressed issues related to care transitions (Coleman et al., 2006; Fortinsky et al., 2006; Parry et al., 2006, 2009; Rosati and Huang, 2007). Some of these studies focus on the Medicare population and mostly on rehospitalization. Parry et al. (2006) claimed that patients with chronic illness often find need to navigate the health care system but are unable to do so due to lack of knowledge. The study by Coleman et al. (2006) on community-dwelling adults aged 65 years or older found that the patients received a care transition intervention (tools to promote cross-site communication, encouragement to take a more active role in their care and to assert their preferences, and continuity across settings and guidance from a transition coach) had lower rehospitalization rates than control subjects. The study by Parry et al. (2009) showed that Medicare fee-for-service patients, who were enrolled in a self-care model for transitional care, were less likely to be readmitted to a hospital in general. In summary, previous studies (Coleman et al., 2006; Parry et al., 2006, 2009) have suggested that acute or chronically ill older patients and their caregivers have the desire to be coached to ensure that their needs are met during care transitions.

Movement to embrace family and non-family visitor involvement in bedside patient care

Since 2007, the USA Joint Commission has stressed the need to define and communicate ways for patients and their families to report concerns about safety and encourage them to do so. The rationale behind this movement is a belief that patients and their visitors have

important roles within health care teams by identifying potential medical errors and preventing hospital-acquired injuries. For example, clinicians may tell patients and their families how to help prevent hospital-acquired injurious falls and infections as well as how to ask questions when they do not understand the instructions provided by physicians or nurses (Remen, 2001; Seton, 2010). In other words, family involvement in bedside inpatient care is increasingly being emphasized as a means to provide safer and error-free bedside care (Remen, 2006).

The study by Tzeng and Yin (2008a) surveyed the roles for and motives of being a visitor to accompany a hospitalized loved one in a Taiwanese hospital (n = 1034 visitors). Their primary motives included, but were not limited to, being one of their responsibilities, coming to help voluntarily, showing filial piety for their parent, and being afraid that the patient could not obtain appropriate care. About 80% of them were present to attend to patients' physical care, 61% to offer psychological support, and 63.5% to express their desire to learn more about the patient's medical condition and illness.

As a summary of the literature reviewed above, such as the findings of the study by Tzeng and Yin (2008a), the dynamic balance model of family ecology (Figure 1) was proposed by the authors. This model only addresses family visitors. The scenario where an adult loved one is hospitalized was used for illustration purposes. Family ecology emerges as an essential component in the context of family involvement. The concept of family ecology deals with the spatial and temporal interactions within a family, which may include as few as two members or be as extensive as a clan (McLeroy et al., 1988). Because members of the same family ecology are interdependent, an invisible ecology chain links all the members together as a joint operation coexistent entity. Visitors, especially family members, often have to juggle their time and energy among their various obligations and roles (Tzeng, 2004; Tzeng and Yin, 2007; Tzeng et al., 2007).

This conceptual model (Figure 1) has never been tested. Thus, this model could be useful to guide future research directions for this complex phenomenon of family involvement in various caring settings. To develop relevant hospital policies to encourage family and non-staff visitor involvement in bedside patient care during hospitalization, a case study was conducted to increase our understanding of the prevalence of non-staff visitor presence in acute inpatient care settings.

The case study in an academic medical center in the Midwest United States design

This descriptive study, a small-scaled case study, aimed to understand the prevalence of non-staff visitor presence in acute inpatient care settings within a US hospital environment. It was designed to answer a research question: What is the prevalence of visitor presence in a specific hospital in the Midwest United States? This study collected only observable objective data as a step forward to understand the phenomena of the prevalence of non-staff visitor presence in acute inpatient care settings within a US hospital environment. Subjective information (e.g., staff reaction to non-staff visitor presence) was not collected as it is not the focus of this study.

The study hospital was the academic medical center affiliated with one of the authors' employed Universities. Due to limited research resources and personnel, a convenient sampling was used for the studied acute inpatient care units. As an exploratory study, the authors' goal was to recruit two adult acute inpatient care units and one pediatric acute inpatient care unit. All the beds within the identified study units were observed.

The term of "visitor" refers to any types of non-staff persons present at bedside, including family members, relatives, neighbors, friends, and colleagues. This study measured visitor presence as a proxy to estimate the prevalence of family involvement in acute care settings. It was conducted in two medical units (unit A: 32 beds, 16 private and 8 semiprivate rooms; unit B: 32 beds, 16 private and 8 semiprivate rooms), and one pediatric medical and rehabilitation unit (unit C: 45 beds, 6 private and 17 semiprivate rooms) in April, 2007.

The study hospital's general visiting hours are from 11 A.M. to 8 P.M. If visitors are not able to come during these hours, they need to talk to the floor nurses about unit-specific visiting policies. Requests for overnight visits must be directed to the floor nurses for any unit-specific guidelines or restrictions. According to the report by Neil et al. (2010), the study hospital has flexible visitation policies.

DATA SOURCE AND COLLECTION PROCEDURES

The procedure for data collection was designed to answer the research question of this study: What is the prevalence of visitor presence in a specific hospital in the Midwest United States? The procedure was described below in detail. The procedure of data collection is reproducible. A research assistant trained by one of the authors counted the number of visitors for each patient on two weekdays and two weekend days at three predetermined time points for each day (9:00-10:30 A.M., 2:00-3:30 P.M., and 7:00-8:30 P.M.). These three time points were chosen by the researchers to understand the prevalence of visitor presence in the morning, afternoon, and evening, with the understanding that the study hospital's general visiting hours are from 11 A.M. to 8 P.M.

One trained research assistant collected all the data across all 36 data collection time points (4 days × 3 time points × 3 inpatient care units). The research assistant's visual observation was recorded in the process of data collection. No interactions of the research assistant with the patients and visitors were required. Each patient room was visited only once at each data collection time point. If a patient was out of the room for any reason, only the number of visitors who stayed at the bedside was recorded. If one patient was being discharged and a new patient had arrived, the number of accompanying visitors of the patient who was being discharged was recorded. Sitters and staff members were excluded in the counts;

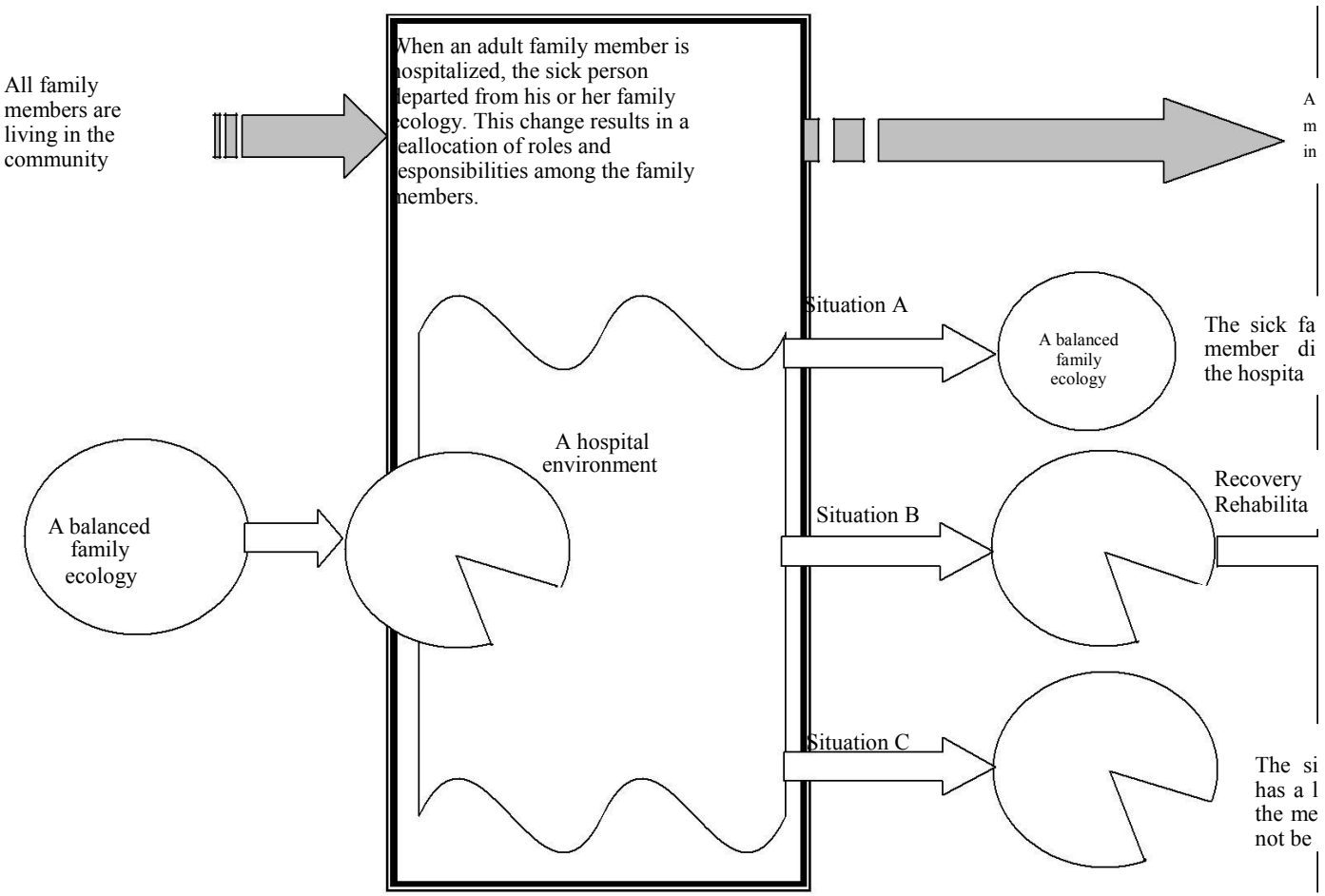

Figure 1. The dynamic balance model of family ecology: An example using the scenario in which an adult loved one is hospitalized.

(1) A circle indicates that a balance is reached in family ecology (e.g., successful reallocation of family matter-related obligations among fa indentation means that at least one family member cannot perform his or her roles within the family (e.g., economic responsibility) and may to care for him or her (e.g., during rehabilitation or recovery). If a family member dies, the diameter of the circle decreases to indicate the s members included in the family ecology. If a new family member is added (e.g., an infant, an adult through marriage), the diameter of the cir added member requires care by another member (e.g., an infant), this circle is indented.

(2) Three situations, as examples, are graphed into this figure to illustrate the dynamic balance in family ecology. Situation A: If the hospitali being discharged, the circle diameter decreases as the total number of family members decreases. Situation B: If the loved one lives after a to the community, the family ecology would not be able to immediately reach a balance because this sick family member may still need s during rehabilitation or recovery. A balance may not be reached until this sick family member recovers to the extent that he or she can per and obligations before the most recent hospital admission. Situation C: If the sick loved one lives after a hospital discharge and returns to th disability (e.g., quadriplegia after a car accident), the family ecology would not be able to reach a balance because this sick family member s

they were required to wear identification cards, which were obvious and allowed the research assistant to differentiate them from visitors. Data collected included: (1) data collected on weekdays or weekend days: 1 = a weekday, 0 = a weekend day; (2) the times data was collected: 1 = morning, 2 = afternoon, 3 = evening; (3) room assignment: 1 = staying in a private room, 0 = staying in a semiprivate room; (4) patient gender: 1 = male, 0 = female; (5) having a hospital-paid sitter: 1 = yes, 0 = no; (6) having at least one visitor present: 1 = yes, 0 = no; and (7) the total number of visitors present at bedside.

Data analyses

The SPSS 16.0 Window version (Chicago, IL, USA) was used. Descriptive analyses (frequency, percentage, mean, and standard deviation as appropriate) were used to answer the question of: What is the prevalence of visitor presence in a specific hospital in the Midwest United States?

Limitations related to the study design

Due to limited budget at the time of data collection, only three study units from the same hospital were included, which is a limitation related to the scope and depth of this study and the limit on the generalizability of the study findings. Only one data collector was used and, as a consequence, the reliability of the collected data could not be examined. The data was collected in April, 2007, which may not reflect the changes, if any, on the study hospital's family visitation policies as well as nurses' practices, attitudes, and behaviors related to family and non-family visitor involvement in bedside care.

In addition, this study did not survey the relationships between the patients and the visitors, so visitors could be relatives, neighbors, friends, or colleagues. Therefore, this study was unable to determine that non-staff persons present at bedside were family members rather than friends, neighbors, or coworkers. Also, this study did not collect family composition information in detail (e.g., socioeconomic status, religious and cultural values, and the total number of household members). The collected data only included the presence of non-staff persons, not the activity of those non-staff persons (visitors) performed. The perspectives of the visitors and the staff members working in the units regarding the activities and roles of the visitors were not surveyed. Therefore, the activities and roles of the non-staff persons present at bedside were unable to be determined. This study also cannot determine whether these non-staff persons were there to provide or enhance the care. In other words, this study collected only observable objective data, because the authors' objective was to understand the phenomena of the prevalence of non-staff visitor presence in acute inpatient care settings within a US hospital environment. As a result, subjective information (e.g., staff reaction to non-staff visitor presence) was not collected as a study limitation.

Ethical considerations

The institutional review board of the study hospital and the employed University reviewed and approved this study to ensure human subject protection.

FINDINGS

A total of 1,296 observations were recorded; 1,150 (88.7%) were occupied beds and these 1,150 data points were used for the analyses. Among these 1,150 data points, 423 (36.8%) were in private rooms and 727 (63.2%) were in semiprivate rooms. About half of the data points were collected during weekdays (n = 578; 50.3%) and 49.7% (n = 572) were collected during weekend days. A total of 399 (34.7%) data points were collected in the morning, 374 (32.5%) collected in the afternoon, and 377 (32.8%) collected in the evening. According to the information posted on the home page of the study hospital, the study hospital has flexible visitation policies and the general visiting hours are from 11 A.M. to 8 P.M. However, the finding showed that the prevalence of visitor presence was comparable across three predetermined time points for each day (9:00-10:30 A.M., 2:00-3:30 P.M., and 7:00-8:30 P.M.). In other words, in clinical practice, the 3 study units seem to have flexible opening to visitation policies.

A total of 423 (36.8%) data points were collected in the private rooms and 727 (63.2%) in the semiprivate rooms. As observed, 622 patients (54.2%) were men and 526 (45.7%) were women; there were missing values for two data points that the research assistants could not observe. Only 16 patients (1.4%) had a hospital-paid sitter at the bedside; all 16 sitters were observed in adult medical units. A total of 415 patients (36.1%) had at least one visitor present and 645 (56.1%) did not have any visitor present; a total of 90 data points had missing values that the research assistant was unable to determine. The average number of visitors present was 1.44 (SD = 0.86; n = 414 valid data points); 292 (70.5%) had only one visitor, 86 (20.8%) had two, 23 (5.6%) had three, 7 (1.7%) had four, 2 (0.5%) had five, 3 (0.7%) had six, 1 (0.2%) had seven. Table 1 shows the descriptive information of the study variables by three study units. In the two adult medical units, about 22% of the data points indicated that the patient had at least one visitor present. In contrast, 59.1% (n = 254) of the data points collected in the pediatric unit indicated that the child had at least one visitor present.

DISCUSSION

This small-scaled case study answered the question of "What is the prevalence of visitor presence in a specific hospital in the Midwest United States?" and found that about 36% of the patients had at least one visitor present during their hospital stays. Among adult medical patients, about 22% of them had at least one visitor present. About 59% of the pediatric patients had at least one visitor present during the hospital stays. In other words, this US academic medical center had a relatively popular culture of family and non-family visitor involvement for hospitalized children but not for adult patients.

When the sick family member was a child, most families would spare at least one adult visitor to accompany the child for the entire hospital stay. A common belief is that having at least one familiar face accompany the sick child may promote the healing process and decrease

Table 1. Descriptive information of the study variables (*n* = 1150 for 3 units).

Variable	Unit A Medical unit *N* = 358 (%)	Unit B Medical unit *N* = 362 (%)	Unit C Pediatric unit *N* = 430 (%)
Data collected period			
Weekdays	178 (49.7)	186 (51.4)	214 (49.8)
Weekend days	180 (50.3)	176 (48.6)	216 (50.2)
Morning (9:00-10:30 A.M.)	125 (34.9)	125 (34.5)	149 (34.7)
Afternoon (2:00-3:30 P.M.)	118 (33)	115 (31.8)	141 (32.8)
Evening (7:00-8:30 P.M.)	115 (32.1)	122 (33.7)	140 (32.6)
Type of rooms			
Private	186 (52)	187 (51.7)	50 (11.6)
Semiprivate	172 (48)	175 (48.3)	380 (88.4)
Patient gender			
Male	218 (60.9)	158 (43.6)	246 (57.2)
Female	140 (39.1)	204 (56.4)	182 (42.3)
Unsure, no data recorded	—	—	2 (0.5)
Having a sitter at bedside			
Yes	7 (2)	9 (2.5)	—
No	334 (93.3)	332 (91.7)	404 (94)
Unsure, no data recorded	17 (4.7)	21 (5.8)	26 (6)
Having at least one visitor present			
Yes	79 (22.1)	82 (22.7)	254 (59.1)
No	261 (72.9)	260 (71.8)	124 (28.8)
Unsure, no data recorded	18 (5)	20 (5.5)	52 (12.1)
Mean (SD)\Minimum-maximum			
Number of visitors present (having at least one visitor present = yes)	(n = 79)	(n = 81)	(n = 254)
Mean	1.43	1.57	1.57
Standard deviation	0.83	1.06	1.06
Minimum-maximum	1-5	1-7	1-6

stress levels caused by staying in an unfamiliar surrounding and undergoing medical treatments and procedures. To spend time at bedside, these visitors most likely had a flexible work schedule, that is, they were able to take personal or vacation leave, or were unemployed. When a child is hospitalized, the economic burden on and time commitment of the adult visitors, especially family members, can be significant. Compared with pediatric patients, having visitors for adult inpatient was less popular; visitors were almost two thirds less common for adult patients. Visitors may perceive their adult loved one as being less vulnerable than a sick child. In addition, when an adult loved one is hospitalized, the rest of the family members must create a balance by redistributing various family-related responsibilities. However, further research is needed to validate these conclusions, including the impacts on a family's ecology due to a loved one being hospitalized.

From a holistic nursing care viewpoint, having visitors during a hospital stay undoubtedly fulfills level 3 of Maslow's human needs-love and socialization. Independent mobile patients may try to fulfill their needs at this level (Hignett and Masud, 2006). Hospital care is assumed to fulfill each inpatient's physiologic needs and needs for safety. Previous studies in Taiwan (Tzeng and Yin, 2007; 2008a) suggested that some visitors intended to fulfill only their loved one's physiologic needs. It is possible that nurses who provide bedside care may have different expectations from those of the visitors. Therefore, further research is needed to address the expected roles and the activities performed by visitors from their own viewpoints in US society . It is also important to

compare the differences between the Western and Eastern societies as well as among people with different religious and ethnic backgrounds on the expected roles and the activities performed by visitors.

PRACTICAL IMPLICATIONS

As recommended by the ANA (2001; 2010), nursing care should maximize patients' values in life and extend supportive care to their visitors or significant others. The ANA also emphasizes that nurses must respect diversity and individualize the care to meet the unique needs of the patients and their families. Therefore, hospital administrators and nurse managers may promote family support communication by providing accessible and adoptable environmental and human resource supports (e.g., creating areas for visitors to pray and rest, offering cultural competence on-the-job training to staff members) to visitors so that they are safe, comfortable, and informed.

Nursing practices may have somewhat different emphases in Western versus Eastern health care environments and in various religion-based societies (e.g., Confucianism-based societies in China, Taiwan, Japan, and Singapore). The cultural aspects of patients and their family members can affect the size and involvement of the extended family (Neil et al., 2010). As a result, hospitals must provide concierge services of, but not limited to, (1) language translation, (2) interpretation and explanations of medical diagnoses, diagnostic tests, laboratory results, and treatment information to patients' visitors as appropriate, and (3) assistance in accessing and understanding web-based medical information, as appropriate. Bedside care should be sensitive to the specific needs of the patients and their visitors, including specific beliefs for end-of-life care and religious care (Tzeng and Yin, 2008a, b; Yin and Tzeng, 2007).

Whether in a Western or Eastern society, to promote a culture of family and non-family visitor involvement in acute care settings, hospitals need space-saving ideas to efficiently use the available space in each patient room, especially semiprivate rooms. Each nursing unit should have enough chairs or recliners for visitors. When purchasing this furniture, hospital and nurse administrators should consider methods to store and maintain it (e.g., lightweight recliners with wheels). A loveseat designed to be used as a twin bed may be mounted to the wall of the room. When someone needs to use the loveseat, it can be pulled down; after use, it can be easily folded back. Such design ideas can be economical and save precious space in patient rooms. Thus, further research is needed to design a family-friendly environment, including the patient rooms.

Conclusion

This paper discussed the needs and movement for nurses to embrace visitors during the hospital stays of their loved ones. The case study included in this paper suggested that a culture of family and non-family visitor involvement exists in the US hospital environment when a child is hospitalized, but this is not the case when an adult is hospitalized. Future research may use observations and surveys to understand further the nature of the family and non-family visitor involvement culture in different hospital settings. More studies are required to explore the link between the prevalence of the family and non-family visitor involvement culture and staff performance and patient outcome measures (e.g., hospital-acquired injurious fall rates and pressure ulcer rates).

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