How Nurses Decide to Ambulate Hospitalized Older Adults: Development of a Conceptual Model

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Adults over the age of 65 years account for 60% of all hospital admissions and experience consequential negative outcomes directly related to hospitalization. Negative outcomes include falls, delirium, loss in ability to perform basic activities of daily living, and new walking dependence. New walking dependence, defined as the loss in ability to walk independently, occurs in 16%–59% of hospitalized older patients. Nurses are pivotal in promoting functional walking independence in hospitalized patients. However, little is known about how nurses make decisions about whether, when, and how to ambulate older patients. A qualitative study using grounded dimensional analysis was conducted to further explore how nurses make decisions about ambulating hospitalized older adults. Twenty-five registered nurses participated in in-depth interviews lasting 30–60 min. Open, axial, and selective coding was used during the analysis. A conceptual model, which is grounded in how nurses experience ambulating patients, was developed. Multiple categories and dimensions interact and produce an action by the nurse to either restrict mobilization to the level of the bed or progress the patient to ambulation in the hallway. Factors that seemed to have a greater impact on nurses’ decisions on whether, when, and how to ambulate were the risk/opportunity assessment, preventing complications, and the presence of a unit expectation to ambulate patients.

Older adults account for 45%–65% of all hospital inpatient days (Fulmer et al., 2002; Institute of Medicine, 2008). For many older adults, hospitalization can be a catastrophic event. Negative effects of hospitalization include delirium (Inouye et al., 1993), falls (Mahoney, Sager, & Jalaluddin, 1998), functional decline (Inouye, Bogardus, Baker, Leo-Summers, & Cooney, 2000), and new walking dependence (Brown, Redden, Flood, & Allman, 2009). Studies have shown that new walking dependence is a particularly common negative effect of hospitalization and occurs in 16%–59% of hospitalized older patients (Hirsch et al., 1990; Lazarus, Murphy, Coletta, McQuade, & Culpepper, 1991; Mahoney et al., 1998). New walking dependence has been associated with falls after discharge (Mahoney, Sager, & Dunham, 1994), new nursing home placement, and death (Brown, Friedkin, & Inouye, 2004). Decline in walking ability begins within 2 days of hospitalization (Hirsch et al., 1990) and remains persistent, with 67% of patients failing to improve by discharge (Hirsch et al., 1990) and 27% still dependent in walking 3 months after discharge (Mahoney et al., 1998).
Multiple causes of new walking dependence have been identified, including the illness itself, medical or surgical treatments, hospital environment, and deconditioning effects of bed rest (Kortebein, Ferrando, Lombeida, Wolfe, & Evans, 2007; Mahoney et al., 1998). Lazarus and colleagues (1991) found that 24% of patients had no documented ambulation during 7 days, with 23% of patients remaining in bed. Callen, Mahoney, Grieves, Wells, and Enloe (2004) found that 72.9% of patients considered able to walk did not walk at all. Brown and colleagues (2009) found that 83% of patient time is spent lying in bed.

Only one intervention study was found. Killey and Watt (2006) conducted a study to test whether a twice-daily walking program would enhance mobility. Results from the study found that patients in the intervention group increased walking distance from 38.64 to 79.44 m.

Due to their consistent presence at the patient’s bedside, nurses have been identified in the literature as health care providers who can affect the incidence of new walking dependence in hospitalized older adults. However, only two studies explored how nurses view ambulation of hospitalized patients. Kalisch (2006) conducted a qualitative study and found that ambulation was regularly missed in the provision of nursing care. Reasons given by nurses were related to time required to carry out ambulation, ease of omitting ambulation, and believing that ambulation was the job of physical therapists. Brown, Williams, Woodyby, Davis, and Allman (2007) found that barriers to ambulation most frequently cited by nurses were related to (a) patient physical symptoms such as weakness, pain, and fatigue; (b) presence of devices such as intravenous lines and urinary catheters; and (c) lack of staff to assist patients with out-of-bed activity.

Nurses have traditionally attended to the mobility needs of patients as part of their practice (Ouellet & Rush, 1992) and can improve patient mobility by incorporating ambulation into their standard of care (Mahoney et al., 1998). Yet, little is known about how nurses make decisions about whether to ambulate, how they ambulate, and when they ambulate older patients. The purpose of this qualitative study was to explore how nurses make decisions about ambulating hospitalized older adults.

**Methods**

Human subjects’ research approval was obtained from the institutional review boards at both study sites. The study was initiated in 2007 and completed in 2009. Grounded dimensional analysis was used to explore nurses’ understanding of ambulating patients and how that understanding relates to the actions they take. This methodology is particularly well suited to discovery in areas about which little is known and where understanding and perception are the focus. Grounded dimensional analysis (Bowers & Schatzman, 2009; Morse et al., 2009) is a variant of the grounded theory methodology. It is, like grounded theory, informed by symbolic interaction. There are specific differences in sequencing of analytic procedures that distinguish dimensional analysis from more traditional grounded theory; specifically, open coding tends to continue longer during analysis, avoiding early narrowing of focus. This is reflected most clearly in the mandate to explore “what all is involved,” (Schatzman, 1991) rather than seeking to identify what is salient, during early interviews. In this study, open coding continued through the fifth interview.

**Setting**

Data were collected at two hospitals located in urban areas in southern Wisconsin. The study sites differed in the number of patient days used by people older than 65 years. The first study site reported this to be 29%, whereas the second site reported 51% (Wisconsin Hospital Association, 2008). However, the units where nurses were recruited for the study were included based on their high census of people older than 65 years. Both hospitals were designated teaching hospitals and had bed capacities of greater than 300. The patient to nurse ratio, 1:4 or 1:5, was similar in both institutions.

**Sample**

The sample consisted of a total of 25 registered nurses (RNs) who were employed on either an adult medical or surgical unit and cared for patients older than 65 years.

**Recruiting**

In the early phase of the study, recruitment was open and included any nurse on a medical or surgical unit who worked with adults older than 65 years. In later phases, as categories were constructed, recruitment shifted to include those nurses who were more likely and less likely to mobilize patients. The goal of recruitment in later
phases was to increase conceptual density and to link interactions among the categories (Strauss & Corbin, 1998).

**Data Collection and Analysis**

In a grounded dimensional analysis study, data collection and analysis occur simultaneously. Consistent with the grounded theory method, data collection and analysis for this study can be described in three phases. In all phases, data were collected using in-depth interviews, and were tape recorded and transcribed. Each interview was conducted in a private space away from the patient care unit, lasting 30–60 min. An example of questions used in each phase of data collection and analysis are provided in Table 1. Each phase included recruitment, sampling, data collection, and analysis, building on prior phases. Data were analyzed using a research team of 10 individuals, nurses from a variety of settings, and non-nurses.

**Phase I.**—The primary purpose of Phase I was to explore how nurses think about caring for hospitalized older adults and how they think about ambulating hospitalized older adults. Nurses were recruited by placing flyers describing the study in the mailboxes of all RNs working on either the adult medical or the surgical unit in the first hospital. Ten RNs, five from each unit, responded to the initial recruitment. At this early phase, all RNs were eligible because the researcher was interested in nurses’ general experiences caring for older adults. Data were collected using general unstructured questions used to explore participants’ experiences caring for hospitalized older adults. Because it was important to discover whether nurses considered ambulating patients as a component of the care they provided and how they thought about it, the researcher asked initial participants very nondirective questions such as “Tell me how you care for older adults on your unit.” Data were analyzed using open coding. This analysis revealed that all nurses spontaneously identified that “mobilizing” patients was important, of which ambulating was one type. Seeing ambulation as only one of the types of mobilizing helps to explain how nurses make decisions about ambulating patients.

**Phase II.**—The primary purpose of Phase II was to identify dimensions within the categories that had been discovered in Phase I. Recruiting was guided by theoretical sampling based on categories (types of mobilizing or reasons for not walking patients) identified in Phase I. Specifically, three nurse managers were asked to identify nurses who routinely walked patients and those who did not and invite them to participate in the study, facilitating the comparative analysis. Ten additional nurses (including three nurse managers) were recruited for this phase, three nurses who routinely walked patients and four who did not, according to the nurse managers. Nurses were not told they had been selected this way. Data collection was designed to further open coding and to provide greater depth in categories identified. While the researcher continued to ask “Tell me about how you provide care to older adults,” additional questions such as

<table>
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<th>Sample of Interview Questions</th>
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<td><strong>Table 1.</strong> Sample of Interview Questions</td>
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<td><strong>Phase I</strong></td>
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<td>“Tell me how you care for older patients?”</td>
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<td>“You mentioned the word ‘mobilizing’ when talking about older patients. Can you describe for me what ‘mobilizing patients’ means?”</td>
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<td>“Some nurses have talked about patients they would attempt to get up and patients they would not get up. Can you describe for me patients who you would get up and those who you would not get up?”</td>
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<td>“Some nurses have talked about older patients who come from nursing homes and older patients who come from their own homes. Can you describe for me patients who come from nursing homes and those who come from their own homes?”</td>
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<td>“Some nurses feel that having experience with getting patients up and walking influences their decisions about getting patients out of bed. Besides experience, are there other things that influence your decisions about whether to get a patient up and walking?”</td>
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<td>“Nurses have talked about ‘bad days’. What does ‘bad day’ mean to you? How does a bad day affect the type of mobility you engage the patient in?”</td>
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<td><strong>Phase II</strong></td>
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<td>“Some nurses said they would not get patients up to walk who were physically large; nurses said it was unsafe. Have you experienced that? If so, can you tell me about how you judge whether it is safe or not to get a patient up to walk?”</td>
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“What are the different ways to mobilize patients?” and “What are some of the reasons for not walking patients?” were included. In Phase II, data were analyzed using axial coding. This analysis revealed three main types of mobilizing (moving in bed, up to chair, and ambulating) and many reasons for not walking patients (characteristics about the patient, nurse, and organization).

Phase III.—The primary purpose of Phase III was integration of categories. Theoretical sampling guided recruitment of five additional nurses who were either highly unlikely or highly likely to walk patients during hospitalization. Interview questions were altered to facilitate an exploration of how characteristics of patient, nurse, and organization interacted to influence whether a patient is walked and what influenced the type of mobilization selected. At the same time, focused interview questions were added to generate data for selective coding, thereby maximizing both depth and integration of categories. Data analysis focused on integrating categories and exploring how patient, nurse, and organizational characteristics interacted with the type of mobilization chosen by the nurse. This resulted in the identification of a risk/opportunity assessment by the nurse and a level of mobilization. The outcome of this analysis was the development of a model to help explain how nurses make decisions about mobilizing hospitalized older adults. Saturation was obtained on purpose of mobilizing, the significance of a risk/opportunity assessment, and levels of mobilizing. All nurses identified preventing complications as the reason for mobilizing. All engaged in a risk/opportunity assessment when deciding whether, when, and how to mobilize patients. The levels of mobilizing were consistent among nurses. Influence of others, patient label, and organizational characteristics were not saturated.

Several strategies were used to ensure rigor of the study. First, a large and diverse research group participated in data analysis, making it less likely that preconceived assumptions would be imposed on data. Member checking was also used throughout data collection. In Phase II, participants were asked to respond to categories and dimensions that had been generated by preceding participants. In Phase III, participants were asked to comment on the developing matrix. They were asked to identify missing dimensions, to suggest any alternate explanations or relationships, and to elaborate on any section of the matrix. Finally, each dimension and relationship included in the conceptual model was tested by locating supporting quotes and searching for negative cases within the data set.

Results

Based on the nurses’ discussions of how they decided whether, when, and how to ambulate patients, a conceptual model (see Figure 1) was developed. When nurses talked about providing care, they talked about ambulation and other forms of mobility; however, mobility was used primarily as a means to another end, not as an end in itself. Nurses talked about mobilizing patients or getting patients moving. These terms were used to designate actions ranging from rolling over in bed or getting up to a chair or ambulating (which generally meant walking in the hall). When nurses cross the realm of thinking about moving patients to the action of moving the patient is the point of decision making. The decision-making process is highly sensitive and affected by many factors.

Mobilizing Patients

Hospital Trajectory.—Mobilizing older adult patients occurred throughout hospitalization but varied in terms of how patients were mobilized and the reasons for mobilizing. Nurses described patients as being in one of three phases: acutely ill, recovering, and getting-ready-for-discharge. The acutely ill phase is marked by physiological instability and is often relatively short. Reasons for mobilizing patients were consistent throughout the course of hospitalization (preventing complications). However, strategies used to mobilize patients differed depending on the phase of hospitalization.

So if the first day, you know, they’re sick, we’re dealing with the acute issue. When they start to feel better, they are able to get up. (Interview 2, Site 1)

For all nurses, acutely ill patients are limited to bed mobility. Once physiologically stable, getting up to a chair or ambulation can be considered.

The recovering phase occurs when patients become physiologically stable and seems to comprise a significant portion of the hospitalization. The recovery phase is generally the longest phase and where there is the most variation in terms of how nurses mobilize patients. It is also the most influenced by an assessment of the risk/opportunity for mobilizing.
If they are hooked up to 25 tubes, we don’t push them to walk, they are sick . . . But when they start getting tubes out is when we say, “Okay you should start walking”. (Interview 5, Site 1)

The getting-ready-for-discharge phase often occurs when discharge is anticipated within the next day. The phase is also generally short and often unexpected by the nurse.

Sometimes, you find out, oh, my patient is getting discharged today and we haven’t had a chance to talk to their nursing home, or their home care provider, and their family. (Interview 3, Site 1)

Although ambulation is sometimes pursued during the recovering phase, it often does not begin until the patient is getting ready for discharge. This is generally the shortest phase, with little time to get the patient up and walking successfully.

*Purpose for Mobilizing.*—Regardless of the phase, patients were mobilized for three purposes: to prevent complications, monitor progress, or compliance.

**Preventing complications.** Preventing complications was described as the most consistent and significant reason for mobilizing patients. The complications of greatest concern were deep venous thrombosis (DVT), pneumonia, pressure ulcers and, secondarily, functional decline. Of these, DVT was by far the most feared complication. In addition, the complication nurses were most concerned about preventing seemed to correlate with the phase of the hospital trajectory the nurse placed the patient in. For example, in the acutely ill phase, nurses were primarily concerned about preventing pressure ulcers and pneumonia. This could be achieved by rolling the patient from side to side in bed. Once patients entered the recovering phase, the primary concern was the prevention of DVTs, with pressure ulcers and pneumonia becoming secondary. Although acknowledging that ambulation was the preferred method for preventing DVTs, nurses indicated that there were other options for preventing these complications. For example, use of an incentive spirometer, applying sequential compression devices to the
patient’s legs, dangling the patient on the edge of the bed, or getting the patient up to a chair were all seen as acceptable and effective. As DVTs, and secondarily pneumonia, were seen as the most important complication to prevent, ambulation was seen as ideal but not necessary. Nurses indicated that other strategies could be used almost as effectively.

Significantly, only one nurse interviewed indicated that functional decline was an important complication to prevent during hospitalization, suggesting that it must be addressed during the recovering phase. Although others acknowledged that it was important when specifically asked, only one identified this spontaneously as a complication that nurses considered or that determined how patients were mobilized during the first two phases of hospitalization. For most nurses, preventing functional decline was not considered until patients moved into the getting-ready-for-discharge phase; however, most patients have already lost function by this phase. There were no differences between the nurses on medical and surgical units.

They become de-conditioned. People might say, “Oh they are fine, they can do that.” But the stay in the hospital might have changed that for that person. I just want to make sure they can go home, sometimes they rush them through here and a three-day hospital stay just isn’t enough. (Interview 3, Site 1)

Monitoring progress. Nurses used mobilizing as a primary way to assess a patient’s general status and determine how well they were progressing during the first two phases of hospitalization. In the acute phase, nurses assessed the patient’s ability to turn independently in bed to determine physiological stability, strength, and cognitive status. As the patient recovered, nurses monitored patient status and progression by assessing the patient’s ability to sit on the edge of the bed, to stand, and finally to ambulate. General progress was determined by amount of assistance needed. Some nurses monitored early in the shift to determine whether mobility could be delegated to a certified nursing assistant (CNA) and to report off to the next shift about the patient’s progress. Some nurses assessed later in the shift in order to prepare for shift report.

That’s part of my assessment . . . getting them up and seeing how much they can do . . . can they roll to their sides and push themselves or do they need some assistance to get up on the edge of the bed. (Interview 8, Site 1)

In the getting-ready-for-discharge phase, nurses use mobility to determine the discharge location (home or nursing home) and level of assistance needed after discharge.

Compliance. Complying with written orders or unit expectations to mobilize also influenced the level of mobilization. Nurses described two responses to a specific physician order related to mobility: they either rejected the order or complied with the order. When nurses rejected the existing physician order for level of mobility, they took one of two approaches. First, they could ignore the order and do what they wanted with the confidence that it was the right thing to do for the patient. This was particularly true when bed rest orders were still in place into the recovery phase.

As an experienced nurse, you know you are going to walk that patient or get them up regardless unless there is a specific order for bed rest. (Interview 7, Site 1) There is no good reason for them to be on bed rest, I’ll get them up without even getting the order changed. (Interview 7, Site 1)

Or, second, they could have the order changed by approaching the physician and requesting a change in the activity order or requesting an order for physical therapy.

We’ll do what we need to involving the doctors, making sure the orders are up to date. If there is an old bed rest order I call them and get it changed. (Interview 2, Site 1)

Still, other nurses did not question activity orders (i.e., bed rest) and instead followed the order as written. This occurred more with new graduate nurses and in special populations, such as orthopedic or vascular patients.

Frequently, physician orders were ambiguous, such as “up ad lib” or “up three times a day.” When this occurred, nurses were left to decide the most appropriate level or frequency of mobility.

How Nurses Mobilized Patients

Nurses’ decisions about how to mobilize patients involved risk/opportunity assessments and were influenced by patient, nurse, and organizational characteristics.

Risk/Opportunity Assessment.—Deciding whether—and at what level—to mobilize a patient involves an assessment of both the risks and the opportuni-
ties involved. Risk is determined by the likelihood that “mobilizing” will result in injury to either the patient or the nurse. Opportunity is determined by the availability of resources needed to mobilize the patient safely. A low-opportunity assessment was most affected by availability of CNAs and activity on the unit. Low opportunity seemed to result in limiting mobility to the bed or the chair. A high-risk assessment always resulted in lowering the level of mobility and, consequently, a lower likelihood of ambulating the patient. Nurses considered patient characteristics, nurse characteristics, and organizational characteristics to determine the risk/opportunity assessment. It is the interplay of the categories in the context of preventing complications that explains how nurses decide whether a patient will be ambulated.

**Patient Characteristics.**—Physiological, physical, and cognitive status of the patient was central to determining risk. Patients who were assessed as high risk were less likely to advance to higher levels of mobility such as ambulation. During the recovering phase, patients assessed as physically unstable, physically large in size, or with compromised cognitive functioning were considered high risk. Patients who were large, heavy, unsteady on their feet, unable to bear weight, or unable to follow commands were seen as increasing the risk for injury to both themselves and the nurse. In contrast, patients who were small and lighter were seen as low risk.

I have gotten a person up by myself if they are a little elderly lady, who you know’s 100 pounds because I know I could grab her if I needed to. (Interview 7, Site 1)

Patient characteristics have an impact on perceived risk for injury during ambulation. As perceived risk for injury (nurse or patient) increases, the likelihood of ambulating decreases.

Patients who were cognitively impaired were also seen as high risk for injury. To identify cognitive impairment, nurses tested patients’ ability to follow instructions, which was sometimes done by testing whether the patient would call for help to get out of bed after being instructed to do so.

I’ll say to them the first time you get up would you just ring your call light . . . the person that doesn’t ring then I question their cognitive ability. (Interview 13, Site 2)

Concerns about patient safety often limited cognitively impaired patients to the bed or chair.

Obviously their mentation, are they confused. A lot of times I won’t (get them up), you might not feel as safe. (Interview 9, Site 1)

**Nurse Characteristics.**—Nurses considered their own abilities and experiences when deciding whether and how to mobilize patients. The nurse’s physical self-perception (personal strength and size), experience and confidence mobilizing large or unsteady patients, and prior injury to self or others all influenced assessment of risk. When nurses felt they lacked sufficient physical strength to mobilize a high-risk patient, the level of mobility decreased, often resulting in patients moving only to a chair during the recovering phase. When nurses see themselves as strong and confident, however, they are more inclined to get the patient walking during the recovering phase.

I tend to be a little bit stronger, so I will just stand them up. If it doesn’t go well, we sit back down, that’s all there is to it. I will try it. Another person may . . . not let them actually try to stand. (Interview 5, Site 1)

We had to do a slide board to the chair, just because she couldn’t bear weight on her one leg. (Interview 6, Site 1)

Nurses with experience in long-term care settings (particularly as CNAs) or in rehabilitation felt more confident with large or unsteady patients and were more likely to ambulate.

I worked in a nursing home for a number of years and the expectation was we were just like little moving machines and we did everything ourselves. (Interview 11, Site 2)

**Organizational Characteristics.**—Organizational characteristics affecting decision making included availability of resources, level of unit activity, and unit expectations, with unit expectations having the most significant impact on whether nurses ambulated patients.

**Resources.** Availability of resources affected the opportunity component of the risk/opportunity assessment made by the nurse. Resources generally considered in a risk/opportunity assessment were CNAs and equipment availability.

If we had extra CNAs, patients would get up faster and move more often, definitely. (Interview 13, Site 2)
Our CNAs are invaluable to us. They do a lot of the physical work, getting them (patients) back and forth to the bathroom. We couldn’t do it without them. (Interview 13, Site 2)

Unit activity level. An unusually high level of unit activity interfered with getting patients up. Very busy days or “bad days” occurred with a high number of admissions or discharges or high patient acuity. At these times, “necessary activities” such as passing medications, reviewing orders, communicating with physicians, assessing the patient’s physiological status, and managing the patient’s pain were priorities. Bad days lowered the opportunity to mobilize patients beyond the bed.

I can say, unfortunately, on days when it has been a bad day and don’t have a lot of help, when you’re busy. You are just turning them. Sometimes, yeah, you do leave them. (Interview 7, Site 1)

Unit expectations. A central organizational characteristic was the expectation for ambulation at the unit level. In general, facility-wide and unit-based expectations, regardless of how clearly they are communicated, were insufficient to achieve general patient mobilizing. Rather, clear expectations in combination with some form of accountability had a more significant impact on mobilizing patients. Accountability was achieved when mobilizing patients was made visible to others and when there were consequences for not mobilizing patients. On units where nurses described a high level of ambulating patients during the recovering phase, expectations and performance were made visible to colleagues and supervisors through (a) white boards in the patient’s room or at the nurses’ station and (b) the end-of-shift report. The white board made the nurse accountable to the patient, family members, and colleagues. When reporting mobilization was routinely included in the shift report, nurses described mobilizing more frequently and at a higher level than when it was not. This was particularly true when consequences for not doing so were clear and consistent.

You can tell those units where it is an expectation. You have to check off how many times the patient has gotten up or walked on the white board and it is brought up in report how many times the patient needs to get up. (Interview 23, Site 1)

On units where the expectation to mobilize was explicit and clear, nurse managers and nurse specialists engaged in surveillance of staff by making unit rounds to see if patients were out of bed or ambulating in the halls. When nurses did not mobilize patients, they were “coached” by their supervisors.

When you are observing that it is not getting done ... then it’s time to coach these people, either at bedside or pull them aside and say “This is the expectation and this is what we need to do.” (Interview 17, Site 2)

In contrast, on units without explicit expectations for mobilizing patients, nurses indicated that the white board was rarely updated or used to track how often patients were up or ambulating, and/or there were no consequences when patients were not mobilized.

Interviewer: So what if the nurse just doesn’t do it, what happens?
Subject: If she doesn’t walk her patients? Nothing. (Interview 19, Site 2)

In addition to the risk/opportunity assessment, nurses bring assumptions about older patients. Some nurses label older patients either as independent and probably going home or as nursing home patients. The label becomes a significant indicator to the level of mobility the nurse will engage the patient in. This label often is assigned at admission and taken as the patient’s baseline. If the nurse’s perceived (even incorrectly) baseline is nonambulatory, they were unlikely to try to walk the patient.

Patient label.—As indicated previously, level of mobility was affected by patient labeling. Older people were often labeled as either nursing home or community patients. Nursing home patients had either come from nursing homes or who “looked like they should be in a nursing home.” Nursing home patients were seen as patients who fell frequently, required significant assistance with activities of daily living, and/or were confused. Nurses assumed these patients would be going to a nursing home upon discharge.

If I was admitting somebody and right off the bat I knew they came in and they said they’ve fallen six times at home, you know they are coming in for placement. (Interview 5, Site 1)

Significantly, when nurses identified a patient as nursing home, the patient was limited to the bed or chair and ambulation was not considered.
I’ve got two of them right now who have come from a nursing home and are going back to a nursing home and they’ve gotten no further than the chair, even though they have the ability. One in particular walks unaided in the facility . . . she didn’t get beyond the chair. (Interview 16, Site 1)

In contrast, community patients were assumed to be returning to the community with the goal of returning the patient to baseline. To attain the goal, nurses “pushed” the patient to walk frequently and more consistently.

If I know that this 80-year-old woman played golf three times a week . . . you’re a little bit more aggressive with those people. Hey, you were out on the golf course before you came in with this emergency surgery so let’s get you back out on that golf course. (Interview 14, Site 2)

Influence of Others.—Although patient labels had a significant impact on whether a patient would be ambulated, labels could be shifted with consequences for the level of activity pursued. Shifting of the label occurred when new information suggested the label had been inaccurate. The two most common sources of information that shifted the label were family members and nurse specialists.

**Family.** Whether accidentally or purposefully, family members influenced labeling in two ways. Nurses sometimes overheard family conversations that altered the nurse’s perception of the patient prior to admission. Sometimes, families deliberately informed nurses of the patient’s preadmission status, altering the nurse’s perception.

The family will be saying you know he was walking everywhere, he was going to the store, and it really helps to be reminded of that. Sometimes, I think we need to have pictures or something up that shows, see look at what this person was doing. (Interview 15, Site 1)

When nurses received information that was inconsistent with the label they had assigned, they often shifted the label from nursing home to community and became more aggressive about getting the patient walking.

**Nurse specialists.** Nurse specialists could also shift the nurse’s label by suggesting a baseline different than what the nurse had set. When this occurred, staff nurses were more likely to ambulate patients and progress them quickly.

I’ve said this multiple times where I’ve gone to a nurse and said you know, this patient came from home or this patient walked in here, last week this patient was driving, and you can see this wakeup call like, oh well then, we should be mobilizing. (Interview 16, Site 1)

There are many factors that influence the nurse’s decision about whether and at what point during the hospitalization the patient will be ambulated. Categories that had the biggest impact on the nurses’ decision were the purpose for mobilizing, the risk/opportunity assessment, and how the nurse labels the patient. Having a clearly communicated and enforced unit expectation also had a significant impact on the nurses’ decision.

**Discussion**

All nurses interviewed for this study acknowledged that walking patients was the right thing to do; however, it was not always done. The barriers preventing nurses from ambulating patients are complex. Although ambulating patients has historically been seen as nursing care and is identified in most textbooks on nursing fundamentals as nurses’ work (Ouellet, & Rush, 1992), studies have found that nurses are not reliably ambulating patients (Callen et al., 2004; Lazarus et al., 1991).

The results of this study clearly identify the factors nurses consider when deciding whether, when, and how to ambulate older patients and provide significant insight into the development of new walking dependence as it relates to nursing care of hospitalized patients. The conceptual model grounded in interviews with nurses illustrates the multiple factors influencing decisions about the level of mobilization. Risk/opportunity assessment, hospital trajectory, and nurses’ understanding of the purpose for mobilizing patients all played significant roles in decision making related to ambulation.

Nurses interviewed identified that preventing complications is the most important component of their work. For most nurses that meant preventing DVTs, pneumonia, and pressure ulcers. Preventing new walking dependence was not generally one of the complications nurses aimed to prevent. This may be because the development of DVTs could be fatal and quite visible to the nurse, whereas the consequences of new walking dependence occur after discharge and are not visible to the nurse. In addition, although nurses indicated that walking
was ideal for preventing these complications, other means, such as use of sequential compression devices or incentive spirometers, could be used. When barriers existed, nurses were likely to select an option other than ambulation to achieve their goal.

Nurses also readily discussed the benefits of ambulating patients. They clearly understood and articulated the negative consequences of not walking patients; however, knowing that they should walk patients did not predictably lead to ambulation. Studies reviewed on care of older adults in hospital settings used education and protocols as the primary means of increasing the quality of care provided to older patients. In relation to ambulation, none of the studies measured the impact of education and protocols on ambulation of patients. Results from this study suggest that education and protocols alone would not influence nurses’ decisions about ambulating older patients. Rather, decreasing nurses’ perceptions of risk, enhancing opportunities to ambulate, and increasing accountability for ambulating are more likely to have an impact.

Nurses’ perceptions of risk were based on their interpretations of specific patient and nurse characteristics. Although the characteristics themselves are not amenable to intervention, the determination of risk may be. Significantly, prior experience as a CNA or nurse in rehabilitative settings was related to lower perceptions of risk. Therefore, providing opportunities for nurses to gain tactile knowledge involved in ambulating larger or more difficult patients could have a greater impact on ambulation. In other words, decreasing the risk perceived by nurses could increase the frequency of ambulation of patients and thereby decrease new walking dependence. The positive benefit of frequency of ambulation with distance able to walk has been documented. Killey and Watt (2006) found that simply adding two additional walks per day had a significant increase in the meter distance patients were able to ambulate by discharge.

The risk/opportunity assessment made by the nurse in the recovery phase had a strong influence on whether the nurse chose to ambulate the patient or chose a lower level of mobility. It is not until the getting-ready-for-discharge phase that most nurses become concerned about patients’ functional status or ability to walk. Unfortunately, by the time the nurse assigns the patient as being in the getting-ready-for-discharge phase, the patient has already lost a substantial ability to ambulate. Additionally, because the getting-ready-for-discharge phase is short, little time is available to reverse the complication that has developed. Nurses must then quickly intervene by lobbying physicians to extend the length of stay or identify resources needed when the patient goes home to keep the patient safe in his or her environment. However, the lobbying effort and concern for safety only occurs in patients labeled as community. Patients labeled as nursing home were simply transferred to the next facility with little concern about reversing new walking dependence. If we can shift the nurses’ concern for new walking dependence sooner into the recovery phase, then perhaps nurses will pursue walking patients more aggressively. Shifting walking earlier and more consistently into recovery could affect the incidence of new walking dependence in older patients.

Creating an environment of accountability had a significant impact on whether the nurse ambulated the patient; however, in order for accountability to be effective, it needed to occur on a unit level. Having a hospital-wide initiative to walk patients was not effective because there was no consequence to the nurses if ambulation was not carried out. Rather, having accountability enforced at a unit level had a greater impact, but this process required active and consistent involvement of a nurse manager. It seemed that when nurse managers held mobility as an essential function on the unit, it became adopted as a standard of care and an indicator to the quality of care provided by the nursing staff. The impact of creating a unit culture where walking patients is a priority and a standard of care should be further explored.

Limitations

There are several limitations to this study. This study only used interviews for data collection. Including observations could have strengthened the analysis by identifying actions that conflicted with what the participant reported, allowing the researcher to ask for clarification of the participant’s actions, and increasing the depth and clarity of the analysis. Also, the study was conducted with nurses who worked on medical and surgical units and only in two teaching hospitals. Therefore, the results can only be applied to these types of settings. Other hospital units, such as inpatient acute rehabilitation or orthopedics, may produce different results because of differences in activity requirements and patient mobility goals. This study also
did not systematically gather demographic characteristics on the nurses who participated. In a grounded theory study, subject characteristics are driven by dimensions that are salient to the categories that emerge from the data. What was discovered, however, is that a nurse’s past work experience as a CNA affected their risk/opportunity assessment. Therefore, future studies should further explore the effect of nurses’ past experience on their decisions about walking patients.

This study also had several strengths. Member checking was used throughout the data collection and analysis phases. After the interview, participants were shown sections of the conceptual model that had been developed from the prior analysis and asked to comment on whether the model was accurate. All participants indicated that the model was an accurate representation of their decision making regarding whether, when, and how to mobilize older patients. In addition, to accommodate for the lack of observation, several interviewing strategies were used. More experienced participants were asked to describe how they mobilized patients as a new graduate nurse with how they mobilized patients now. The intent of using comparison was to identify changes in the nurses’ decision-making process with mobilizing patients. Other comparisons were also used, such as asking nurses to compare their decisions about getting patients up on good days versus bad days or whether, and how they got patients up on the different patient units they may have worked on. Using comparisons was another way to increase the depth of the categories and dimensions of the conceptual model that was developed.

**Conclusions**

The decision making by nurses related to walking patients is a complex process. In the past, providing education or protocols has been the primary means to change practice; however, this study demonstrated that lack of knowledge was not a significant barrier to ambulation, so one would not expect education of nursing staff to alter the frequency of ambulation. Rather, an approach that alters the perception of risk and opportunities available to get patients up would likely have a greater impact on changing nursing practice. Additionally, as nurses organize their work around preventing complications, getting nurses to consider new walking dependence as an important complication is essential. Furthermore, establishing ambulation of patients as a standard of care at the unit level, with clear and consistent mechanisms for accountability, would also likely increase ambulation.

Additional research is needed to guide the development of intervention studies. Areas to explore would include organization systems that create accountability mechanisms, nursing units that may have different expectations—for example, rehabilitation—and having knowledge of patients’ ambulatory status prior to hospitalization. Ultimately, research is needed that examines the impact of interventions that are based on how nurses make decisions in relation to ambulation.

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