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Barriers to promoting mobility in hospitalized older adults

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Abstract

Hospitalized older adults who do not receive sufficient mobility are more likely to sustain negative health outcomes including higher rates of mortality and institutionalization. Accordingly the purpose of this secondary data analysis was to examine the nurse-promoted mobility of hospitalized older adults and the association between nurses' barriers and nurse-promoted mobility. In addition, the relationship between patient severity of illness, proxy levels for function and nurse promoted mobility was examined. The final study sample included 61 nurses working in medical units caring for a total of 77 older adults. The findings of this study suggest that nurse-knowledge gaps and attitude barriers could potentially influence the type and frequency of mobility they promote in their older patients. A relationship was found between older patients with impaired mobility, using assistive devices for mobility at home, and those at high risk for falls and nurses promoting more sedentary activity such as chair-sitting, and walking in the room. Interestingly, nurses promoted significantly more sedentary mobility for patients with PT orders.

Background

Hospitalized older adults are at greater risk for functional decline due to natural age-related musculoskeletal changes that are further complicated by co-morbidities, chronic illness and insufficient mobility (Cruz-Jentoft et al., 2010; Pedersen et al., 2013). Promoting mobility including ambulation, sitting in the chair and range-of motion are critical, basic nursing care activities that nurses should be doing routinely (Doenges, Moorhouse, & Murr, 2014). Muscle atrophy and muscle weakness are consequences of immobility (Cruz-Jentoft et al., 2010), leading to hospital readmissions (Fisher, Graham, Krishnan, & Ottenbacher, 2016), hospital-acquired comorbid conditions (Peterson & Braunschweig, 2016), and preventable nursing home admission (Liu et al., 2016). Complications resulting from insufficient mobility while hospitalized

can place increased burdens on family members and require increased healthcare system resources (D'Ambruoso & Cadogan, 2012).

The promotion of mobility is important to prevent functional decline, and other adverse health outcomes (Brown et al., 2016; Du et al., 2015; Fisher, Graham, Ottenbacher, Deer, & Ostir, 2016). However, nurses may experience barriers to promoting mobility in this population, which could explain why hospitalized older patients are not sufficiently mobilized (Catchpole, 2013; Doherty-King & Bowers, 2011; Moore et al., 2014). The Knowledge, Attitude and Behavior Framework shows the relationship between interpersonal and external barriers that clinicians may experience, and how these barriers affect the care behavior of clinicians (Cabana et al., 1999; Woolf, 1993). Three overarching barriers include knowledge barriers, attitude barriers and external barriers (Cabana et al., 1999). The central premise is that both interpersonal (knowledge and attitude) and external (patient, interdisciplinary and environmental) barriers may influence nurse-promoted mobility.

Studies suggest that nurse-knowledge, and attitudes, and other barriers may be linked to nurse-promoted mobility (Doherty-King & Bowers, 2013; Hoyer, Brotman, Chan, & Needham, 2015; Moore et al., 2014). Nurse-knowledge barriers may include not having the training to promote mobility, and lacking knowledge of the geriatric patients' needs for mobility (Hoyer et al., 2015; Lee & Fan, 2012). Nurses have also reported that external factors such as patient condition, sedation, and being attached to medical devices, and care coordination were barriers to promoting mobility in patients in the intensive care unit (Leditschke, Green, Irvine, Bissett, & Mitchell, 2012; Lee & Fan, 2012). Finally, nurse-attitudes and beliefs about promoting mobility may be associated with insufficient promotion of mobility (Moore et al., 2014). Nurses' may have the perception of having a risk for self-injury, experiencing stress, and difficulty managing time to promote mobility (Jolley, Regan-Baggs, Dickson, & Hough, 2014). Our recent study (Author et al., 2017) described the perceived barriers that nurses' reported encounter to promoting mobility in the hospitalized older adult. The most frequent barrier was external barriers including

inadequate staffing levels, potential for increased workload if mobility was promoted, and risk for self-injury. Other common barriers included time limitations to promote mobility and the perception that patients are resistant to being mobilized by nurses (Author et al., 2017). While the few studies that examined barriers to nurse-promoted mobility are promising, the incongruence between mobility needed and received persists. To minimize or remove barriers to promoting mobility in hospitalized older adults, and to implement sustainable and scalable solutions in the hospital setting, more studies are needed to build the evidence-base. It is important to not only determine the primary barriers nurses' have to promoting mobility, but also to determine how these barriers may be associated with nurse-promoted mobility.

In particular, the development of both practical and theoretical knowledge is critical to addressing this complex phenomenon of the incongruence between mobility needed and received. For example, while organizations have increasingly focused on system-based rapid quality and process improvement to improve the care of hospitalized patients (Sollecito & Johnson, 2013), the association between nurses' barriers and promotion of mobility may have not been investigated enough to make mobility interventions sustainable. For increased nurse-promoted mobility to become a reality, a better understanding of how nursing practice behavior is affected by these barriers is critical (Knowles, et al., 2015). Further, a conceptual understanding of the association of barriers to nurse-promoted mobility is needed to develop tailored and sustainable mobility interventions. Importantly, interventions may be more effective if they are based on a conceptual framework with well-defined concepts (Conn, et al., 2001).

Accordingly, the purpose of this secondary data analysis was to examine the association of nurses' knowledge, attitude, and external barriers on the promotion of mobility in hospitalized older patients in non-intensive care units. Measures of physical function, severity of illness, Body Mass Index (BMI), severity of illness, the presence of activity and physical therapy orders were included as descriptive variables. In addition, we examined the relationship between

patient impairment of mobility, use of mobility assistive devices at home, being classified as risk for falls and nurse-promoted mobility.

Method

Design, Setting, and Sample.

A cross-sectional descriptive correlational design with convenience sampling was used. Nurses were recruited from two community-based hospitals in the Pacific Northwest. Internal Review Board approval was obtained, and a Health Insurance Portability and Accountability Act (HIPAA) waiver was obtained for de-identified patient-related data. To participate in this study nurses had to work at least 20 hours per week in one of these units: Stroke, cardiac, pulmonary, nephrology, oncology, and general medical units. Night-shift nurses were excluded. Each of these units housed between 30 and 40 acute care beds. These units were selected because hospitalized older adults are commonly admitted to these units for chronic or acute illness. Intensive care and orthopedic units were excluded from this study because nurses may have access to greater resources including safe lifting lift-equipment, staff, and more specific physician's orders.

Sample size calculation for linear multiple regression with fixed model, R^2 deviation from zero was completed a priori with G*Power software (2014) with an alpha level of 0.05, three predictor variables (knowledge, attitude, external barriers), medium effect size ($F^{2=}$ 0.15), and a statistical power level of .8 requiring a total sample size of 85 (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007). The rationale for a medium effect size was based on a cross-sectional study by Hoyer et al (2015) who identified clinically relevant differences in barriers to promoting mobility among health providers which included 82 nurses. A total of 101 nurses were recruited.

Measures and Operationalization of Variables

Independent Variables.

Overall Provider Barrier scale.

Nurse-knowledge barriers, attitude barriers, and external barriers were the independent variables in this study and were measured with the modified Overall Provider Barrier Scale. The original Overall Provider Barrier scale is a validated 26-question 5-point Likert-scale (strongly disagree-strongly agree) with an internal consistency reliability Cronbach's alpha of 0.87. Discriminant validity psychometric characteristics and item consistency were considered adequate with the correlation coefficient between each item and the subscale and the Overall Provider Barrier scale at 0.40 for most items (Hoyer et al., 2015). The scale was validated on nurses, and contains 3 subscales that were used to operationalize the variables including nurse knowledge (4 items) about training to promote safe mobility; questions about nurse attitude (9 items) including perception about patient condition, interdisciplinary communication about promoting mobility, timing of promoting regular mobility, nurses' workload, and nurses confidence and outcome expectancy of promoting mobility, and nurses perceptions about deferring mobility to other disciplines. External barriers influencing nurse-promoted mobility (12 items) include environmental barriers such as lack of transfer equipment or inadequate staffing levels; contraindications to promoting mobility and patient resistance; and time constraints to promote regular mobility. Response options for the Overall Provider Barrier Scale included: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree.

Three additional questions of interest were added: "Promoting mobility in hospitalized older adults is a priority for the organization I work for" (attitude subscale) "I view the promotion of physical activity in hospitalized older adults as a priority" (attitude subscale); and "I know how to assess the lower leg strength of my older adult inpatients" (knowledge subscale). Nurses were instructed to select responses from the Overall Provider Barriers Scale that most accurately reflected their opinions based on their nursing experience during the past 2 weeks. The modified 29-item 5-point Likert Overall Provider Barriers scale showed adequate reliability with a Cronbach's alpha of 0.88. Item total correlation and the subscale item correlation for the

29-question scale was considered adequate with most values at 0.40 or above, indicating good discrimination (Carmines & Zeller, 1979).

The Clinical Barrier Scale was developed for this study to capture the frequency of patient-specific barriers that nurses encountered during one shift. Nurses used this scale to record the frequency of 12 different clinical barriers to promoting mobility in their older patients as encountered during a regular shift (independent variable): Location of equipment, availability of equipment, knowledge of how to use equipment, availability of staff, searching for staff, conflicting priorities, workload, patient condition, patient preference, patient family preference no activity order, conflicting activity order. A 5-point frequency response option (1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always) was used, and this scale was considered reliable with a measure of Cronbach's alpha of 0.90.

Other measures.

Several additional measures were collected as descriptive variables. Proxy measures for patient's physical function as routinely assessed and documented in the patients chart by nurses included: Modified Timed Up-and-Go test (0=no rise; 1=rise with one; 2=rise with two; 3=unable to rise), whether or not patient had impairment of mobility (yes/no), home-use of assistive devices (yes/no), and fall risk (yes/no). These measures are routinely documented by nurses at this hospital as part of the patient assessment every shift. Physicians' activity order (yes/no), and the presence of an order for physical therapy (yes/no) was also captured by chart audit. Demographic data and a Body Mass Index (BMI) were obtained for each patient. Body weight was converted to Kilograms (Kg), and height converted to Centimeters^2 (cm^2). The formula used to calculate BMI is weight (Kg)/height (cm^2) (Jensen et al., 2014). The All Patient Refined-DRG (APR-DRG) Severity of Illness Scale was used to obtain the measures of illness severity. There are four severity of illness subclasses: 1=minor; 2=moderate; 3=major; 4=extreme. The APR-DRGs is reported to be able to estimate the global impairment of older

adults (Pilotto et al., 2011). Patients with increased severity of illness may have greater co-morbidities and may be more likely to have poor health outcomes (Beveridge et al., 2015).

Dependent Variables.

Self-Recorded Mobility Log.

Nurses' mobility-promoting behavior was the dependent variable in this study and was measured using the self-recorded mobility log, which was developed based on nurses' informal feedback on how to best capture the mobility that was promoted in patients during one shift. Nurses' mobility-promoting behavior was operationalized as the type and frequency of mobility promoted using ordinal scaling including: Walking in hall, walking in room, repositioning in bed, promotion of active/passive range-of-motion, and sitting in the chair. Each instance of promoted mobility was documented in the Self-Recorded Mobility Log by asking nurses to select the type of mobility from a drop-down list. Nurses were able to add additional mobility-promotion instances, which were captured as frequency. If nurses selected "ambulation in hall" nurses entered the distance ambulated in feet. Nurses were educated to use markers (10 foot increments) in each unit's hallway to track the ambulation distances.

Procedures and Data Analysis

Informational meetings were held on the hospital units in the breakroom during which nurses learned about the study purpose, were recruited, and informed consent was obtained by the researcher. All training and instruction for nurses was conducted by the same researcher. Nurses received 30 minutes of training from the researcher on how to complete the web-based Self-Recorded Mobility Log and the Overall Provider Barrier Scale. Nurses' completed this training in the hospital setting, and they remained on-the-clock during the training. Methodologic challenges of conducting research in the hospital setting commonly include problems with enrollment, consenting, and completion of surveys, patient and environmental conditions that may impede participating in the study to generate useful knowledge (Lehman, 2009).Therefore, the researcher met informally with nurses who were interested in participating in the study to

discuss the best mechanism to completing the survey and the mobility log. Nurses agreed that the completion of the survey and mobility would be best accomplished by using a one-time electronic method (i.e. e-mail with a link). Accordingly, nurses were sent a link to the Overall Provider Barriers Scale and Self-Recorded Mobility log toward the end of their shift. However, nurses were not informed on what day they would be receiving the link to complete data collection. To minimize the burden and attrition, nurses remained "on the clock" while completing the data collection immediately after their shift. For feasibility reasons and to limit confounding and Hawthorne effects, nurses completed the self-recorded mobility logs on all adult patients in their care. Each nurse had between 1-4 patients for the entire duration of their 8-hour day shift. Because this study targeted nurses caring for hospitalized patients 65 years and older, data for patients under 65 were not included in this analysis.

First, nurses completed the Overall Provider Barrier Scale, followed by the Self-Recorded Mobility Log and the patient-specific 12-question Clinical Barrier Scale. Nurses used unit hallway markers placed in 10 foot increments to provide a more accurate measurement of distance ambulated and mitigate recall bias. Nurses had access to the mobility documentation in the electronic health record, which also minimized recall bias. To ensure consistency and protect private health information, Research Electronic Data Capture (REDCap) was used to distribute, manage and collect the survey and log data, and extract patient demographics and other clinically relevant information.

Data Analyses

All data were de-identified, cleaned and entered into SPSS version 24 for data analysis. Data were summarized as means (standard deviations) and frequencies (percent), and range of scores for sample characteristics, nurse-promoted mobility (walk in the hall, walk in room, chair-sitting, bed-mobility, range of motion), the patient-specific 12-question Clinical Barrier Scale, and the Overall Provider Barrier responses (knowledge, attitude, and external barriers). Negative response-options from the Overall Provider Barrier Scale were reverse coded for

analysis. Likert scale responses were treated as interval data (Allen & & Seaman, 2007; Baggaley & Hull, 1983). A Spearman *rho* correlation coefficient between impaired mobility, use of mobility assistive devices at home, risk for falls and nurse-promoted mobility was reported.

Analyses for the five mobility measures were stratified by whether a doctor's activity order was present. A generalized linear mixed model (GLMM) was used to handle the clustering of patients (with physician activity orders) within nurses. GLMM is a statistical approach to analyze non-normal data when random effects are present (Bolker et al., 2009). GLMM was used to examine the association between three nurse-barriers from the Overall Provider Barrier Scale (knowledge barriers, attitude barriers and external barriers), PT orders, and three outcome mobility measures (frequency of walking in the hall, frequency of walking in the room, and frequency of chair-sitting). There were 10 questions in the Overall Provider Barrier Scale (knowledge, attitude, external barriers) that had missing values representing a total of 0.004% of the data. Little's Missing Completely at Random (MCAR) test was not significant ($p = .992$), and the hypothesis that data were missing completely at random was accepted (Little, 1988).The GLMM technique appropriately handles missing data as well as the correlation among patients seen by the same nurse. Knowledge, attitude, external barriers, along with the presence of physical therapy orders were specified as fixed effects in the model. Patients without activity orders or with bedrest orders were not included in the final analysis, reducing the number of nurses to 61 and patients to 77. The frequency of bed-mobility and range-of-motion was not examined. All significance testing was done using an adjusted alpha level of 0.02 (0.05 / 3 dependent variables examined). The IBM SPSS Statistics software (version 24) was used to perform all analyses.

Results

Sample Characteristics.

Of the 101 nurses signing the informed consent, 85 completed the study. The two main reasons for attrition were being "too busy" and changes in employment status. The 85 remaining

nurses cared for 176 patients of which 98 patients were aged 65 and older. Data for patients under 65 were not included in the analysis. Patient cases with no activity order or bedrest orders were removed, with 61 nurses and 77 patients included in the analysis. Nurse characteristics are shown in *Table 1*; and patient characteristics are shown in *Table 2.* Nurses had a mean age of 40.48 (*SD*=11.6). The patients' mean age was 78.4 (SD = 7.9). Among the 77 older patients 30% were overweight (BMI ≥ 25) and 35% of the patients were obese (BMI ≥ 30. About 64% of patients were classified as having "major" (44%) or "extreme" (19%) severity of illness based on the APR-DRG severity of illness classification system.

Description of Mobility and Nurses' Perceived Barriers

The most frequently encountered clinical barriers to promoting mobility for patients in the nurses' care during one shift included: Nurse-workload (M=3.15 SD=1.4); patient preference (M=3.07, SD=1.18); searching for assistance from staff (M=2.92, SD=1.3); having conflicting priorities (M=2.90, SD=1.3); and patient condition (M=2.89, SD=1.1). Nurse-promoted mobility during one day-shift is show in *Table 3.* Nurses most frequently assisted patients to the chair in the room, or walked patients to the bed and/or bathroom. Most of the 77 patients were not ambulated in the hall and of those who did, they ambulated 200 feet or less per shift. Nearly 80% of older patients in this study had physician's orders for physical activity without restrictions, and 63% of patients had an order to be seen by a physical therapist while hospitalized.

Generalized Linear Mixed Model to Compare Nurse-Barriers, PT order and the Frequency of Nurse-Promoted Mobility.

Table 4 summarizes results from comparing nurse-barriers including knowledge barriers, attitude barriers, external barriers, PT orders, and the frequency of nurse promoted mobility including chair-sitting, walking in the room and in the hall. A significant association was found between nurse-knowledge barriers ($p<0.01$), attitude barriers ($p<0.05$) and walking in the hall. Increased nurse-knowledge barriers and nurse-attitude barriers were significantly associated

with lower frequencies of walking in the hall. The presence of PT orders was significantly associated with greater frequencies of walking in the room ($p<0.01$). Nurses who cared for patients with PT orders promoted walking in the room significantly more frequent (i.e. to and from the bathroom). However, there was no significant association between PT orders and frequency of walking in the hall. Only 23.4% of patients were ambulated in the hall by nurses. Although not significant, nurse knowledge barriers were associated with chair-sitting ($p=0.065$) and walking in the room ($p=0.094$). Nurses with knowledge and attitude barriers tended to promote more sedentary activity (i.e. walking to and from the bathroom and chair-sitting).

Exploratory Mobility-Related Correlations

There were significant relationships between impaired mobility, use of assistive devices, fall risk, and nurse-promoted mobility. A negative relationship was found between impaired mobility and walking in the room (rho (75) = -.229, $p < 0.05$). Use of assistive devices and frequency walking in the hall (rho (75) = -.252, $p < 0.05$), and distance ambulated (rho (75) = -.276, $p < 0.05$) were negatively associated. However, assistive devices and chair-sitting was positively associated (rho (75) = .237, $p > 0.05$). Negative relationships were found between fall risk and frequency walking in the hall (rho (75) = -.275, $p< 0.05$), distance ambulated (rho (75) = -.320, $p < 0.05$), and walking in the room (rho (75) = -.360, $p < 0.05$). Patients with impaired mobility, assistive devices, and at risk for falls tended to be sedentary.

Discussion

A commonly reported finding in the literature is that hospitalized older adults are predominately engaged in low levels of mobility, which results in preventable functional decline (Boltz, Capezuti, Shabbat, & Hall, 2010; D'Ambruoso & Cadogan, 2012; Fisher et al., 2011; Garrison, Mansukhani, & Bohn, 2013; Zisberg & Syn-Hershko, 2016). All 77 patient had activity orders without restrictions, yet only low levels of mobility were promoted. Nurses' report of high workload, varied patient preferences, and patient condition could be some of the reasons that are responsible for low levels of nurse-promoted mobility in hospitalized older adults. For

patients that have impaired mobility, or patients at increased risk for falls, nurses may need to search for assistance from staff to mobilize patients. The need and timing for additional assistance to promote mobility could be problematic if staff are not available when the nurse is ready to promote mobility, and when the patient is willing to be mobilized. Nurses may have other priorities that could have a higher value to them, which could be why conflicting priorities was considered a barrier to promoting mobility. The findings of this study are similar to other studies where nurses have reported staffing concerns, heavy workload, and difficulty prioritizing mobility as barriers to promoting mobility (Barber et al., 2015; Doherty-King & Bowers, 2011; Jolley et al., 2014; Lee & Fan, 2012; Moore et al., 2014). If the goal is for nurses to promote mobility in this population, patient preference and patient condition in addition to impairment of mobility and fall risk may be important potential barriers that need to be considered.

Some of the existing literature on barriers to nurse-promoted mobility has focused on the complexities of the hospital environment, and to a lesser extent on the older adult's physical condition. The findings of this study suggest that existing impairment of mobility, using assistive devices for mobility at home, and being at risk for falls is a combination of patient factors that may have implications for the type and frequency of nurse-promoted mobility. Older patients with impaired mobility may require nurses to seek the help of other staff to ambulate patients in the hall. In this study over 60% of patient were classified as having major or extreme severity of illness. However, very little is known about barriers to engaging in mobility from the patient's perspective. It is conceivable that patients may be—for various reasons—resistant to nurse-promoted mobility. However, patient preferences or potential resistance to engage in the promotion of mobility is understudied, and more research is needed to examine the barriers that older patients experience to engaging in mobility during hospitalization, and how these barriers can be addressed. Improving patient engagement to be mobilized is important, and nurses need to be knowledgeable on how to engage patients and significant others to participate in mobility activities (Burke & Doody, 2012; Moore et al., 2014).

Furthermore, role confusion may be a barrier to nurse-promoted mobility. For example, the literature describes that nurses' may defer basic nurse-promoted mobility to other disciplines such as physical therapists (Doherty-King & Bowers, 2013; Moore et al., 2014). Nurses may hold the view that promoting mobility is within the domain of their scope of practice, and should not be deferred to other disciplines (Author et al., 2017). However, the findings of this analysis show that nurses who cared for patients who had a physical therapist order tended to mobilize patients in the room (to and from the bathroom/chair) more frequently. This finding may suggest that nurses inadvertently defer ambulation in the hall to the physical therapist. There was no significant association between PT orders and frequency of walking in the hall; this could be because ambulation frequency was low overall. In addition, the findings of this study suggest that nurses may have knowledge gaps and attitudes that could potentially influence whether or not they promote ambulation in the hall, and to what extent. Developing a unit-based culture of mobility, and fostering interdisciplinary collaboration, may address some of the barriers that nurses experience. Based on patient-care complexities, nurses may feel overwhelmed or ill-prepared to ambulate patients. More research is needed to examine the implications of interdisciplinary collaboration, and the role of the member of each discipline on the care processes and workflow that are necessary to promote mobility (Barber et al., 2015; Lee & Fan, 2012; Moore et al., 2014).

Limitations

Because of the non-experimental study design there are several limitations including sampling approach, sample size, methods and measurement. A small convenience sample from one geographic region was utilized for this study. Because we stratified the nurse-promoted mobility by whether physicians' activity order was present excluding patient cases with bedrest orders, the sample size for nurses was reduced, potentially impacting the findings of this study which was initially powered for 85 nurses. We did not control for all potentially confounding variables. However, to handle clustering and PT orders, we used GLMM to analyze the

associations between nurse barriers, PT orders and nurse promoted mobility. Although GLMM applied to non-experimental observational research does not permit inferences about causality, the findings of this study add to the existing literature building the evidence-base.

In addition, hospital unit-based culture and practices may vary, such as work-flow patterns, which could have introduced biases. Another limitation is the variability between patient's severity of illness, disease processes, and comorbidities potentially influencing nurse-promoted mobility. To minimize recall bias nurses had access to the patients' medical record. Yet, maturation or inaccuracies could be additional limitations. Nurse-age, gender, and experience were not were not included in the a-priory sample size calculation.

Although the findings of this study suggest this to be unlikely, some nurses may have felt that they should promote (or report) more mobility to provide favorable responses in the mobility log. In addition, nurses may have become fatigued from completing the mobility logs on multiple patients which could have led to inaccuracies. The use of Likert scales may have resulted in raters providing neutral responses, which could be problematic in terms of understanding the study findings. Further, based on the literature on nurses' barriers 3 questions of relevance were added to the scale. This may limit the comparisons to other studies using this measure. Future studies should conduct a psychometric analysis of the Overall Provider Barrier Scale with a larger sample size. Due to these limitations, the generalizability of this study is limited and findings should be viewed with caution. While many limitations exist, we believe that the findings from this study make valuable contributions to the existing science, and also shed light on existing gaps in barriers that nurse's encounter and how these barriers may be associated with nurse-promoted mobility.

Future Research to Advance the Science

Care coordination for hospitalized patients has become increasingly complex for nurses (Catchpole, 2013; Ebright, Patterson, Chalko, & Render, 2003). Insufficient mobility during hospitalization has been linked to problems with care-coordination (Brown et al., 2009; Doherty-

King & Bowers, 2013; Doherty-King, Yoon, Pecanac, Brown, & Mahoney, 2014). Reports of staffing concerns, heavy workload, increased risk for self-injury, lack of time, and difficulty prioritizing mobility speak to the interdisciplinary collaboration that is necessary to promote sufficient mobility in this population. Nurse-led care coordination models at the bedside should be tested as a possible solution to overcome barriers to nurse-promoted mobility (Lamb et al., 2015). In collaboration with the American Nurses Association and the American Academy of Nursing, the Care Coordination Task Force (CCTF) has proposed the development of innovative care coordination practice models that could be valuable to improve the promotion of mobility (*Policy agenda for nurse-led care coordination*, 2015). In addition, patient engagement in mobility during hospitalization is an important line of inquiry. Little is known in terms of barriers to engaging in mobility from the patients' perspective (Leditschke et al., 2012), and how to engage older patient in the promotion of their own mobility.

Conclusion

While greater recognition of this problem is apparent in the literature, the problem of insufficient mobility in hospitalized older adults is far from over. Functional decline is preventable; yet, nurses primarily engage older adults in low levels of mobility. Our study suggests that a variety of barriers may impede the work of nurses to promote walking in the hall. The identification of barriers that nurses' may encounter is key to developing, testing and implementing sustainable solutions to overcome barriers, and to engage hospitalized older adults in greater levels of mobility and prevent functional decline.

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