A Lift Assist Team in an Acute Care Hospital—*Prevention of Injury or Transfer of Risk During Patient-Handling Tasks?*

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A Lift Assist Team (LAT) was created on three units at a medical center where nursing staff were at high risk for patient-handling injuries. LAT members were drawn from the hospital's pool of patient transporters. Using qualitative and quantitative data, this case study summarizes the development, implementation, and experiences of the LAT. Nursing staff valued the LAT, reporting increased staff safety and improved patient care. LAT members reported greater job satisfaction and a newfound sense of assimilation into the nursing group compared to when their role was patient transport only. However, over time, their job responsibilities expanded beyond those officially designated for LAT members. Active, ongoing surveillance of the LAT's exposures and outcomes is warranted to understand whether patient-handling injury risk is shifting from nursing personnel to LAT members.

Work-related injuries and musculoskeletal disorders resulting from lifting, transferring, and repositioning patients are prevalent among nursing personnel in acute care hospitals. Common interventions to reduce these disorders include education, training, low technology devices, and mechanical patient lift equipment. Research to date has demonstrated variability in the measured effectiveness of these interventions, although studies suggest multifaceted interventions are more likely to be effective in reducing patient-handling risks than single-faceted approaches (Dawson et al., 2007; Hignett, 2003; Nelson et al., 2006).

Specialized lifting teams are another approach to reducing adverse musculoskeletal outcomes associated with patient handling. Literature related to lifting teams in health care first appeared nearly two decades ago when Charney, Zimmerman, and Walara (1991) reported the experiences of a large hospital lifting team composed of orderlies. In 2003, Haiduven published a literature review of studies from 1991 through 2001 evaluating lift teams in health care facilities, and several studies highlighting lift teams followed (Guthrie et al., 2004; Hefti et al., 2003; Hobbs, Wolverton, & Clevenger, 2007; Kutash, Short, Shea, & Martinez, 2009; O'Malley et al., 2006; Springer, Lind, Kratt, & Clavelle, 2009; Trinkoff, Brady, & Nielsen, 2003). Most of the studies reported a decrease in the number of work-related injuries and associated costs to nursing staff, increased job satisfaction among lift team members and nursing staff, and increased patient satisfaction. Limitations have also been described, including injury to lift team members and the inability of lift teams to meet patient-handling demands. Intermediate measures must be captured to characterize adoption of lift teams and provide an understanding of the context in which longer-term results are interpreted (Haiduven, 2003).

Through this case study, the authors summarize the development, implementation, and experiences of a Lift Assist Team (LAT) on three neuroscience units at a large North Carolina tertiary-care medical center. In addition, the use of available patient lift and transfer equipment, job

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satisfaction of nursing staff and LAT members, patient safety, and LAT job tasks and workload are described. This research was part of a study funded by the National Institute for Occupational Safety and Health to evaluate the effectiveness of patient lift and transfer equipment introduced on inpatient care units following a policy calling for a "minimal manual lift environment" at two hospitals in the same health care system.

METHODS

Development and Implementation of the LAT

The creation and implementation of the lift team occurred during the medical center's transition to a minimal manual lift environment. In 2004, the hospital introduced a minimal manual lift policy and placed patient lift and transfer equipment on acute care inpatient nursing units. Two years later, in May 2006, the Patient and Visitor Services Department began a 3-month pilot of a lift team on three neuroscience units (general, intermediate/step-down, and intensive care) on a single floor of the hospital. These units were chosen due to the high number of work-related patient-handling injuries among nursing staff compared to other inpatient units of the hospital. Lift team members were chosen from the pool of patient transporters, a group of employees in the Patient and Visitor Services Department. Initially, four male patient transporters were asked to be part of the lift team by their supervisor. Unit coverage was set for 10 hours during the day shift, 7 days per week, with one lift team member working at a time. Members carried a pager and cell phone through which nursing personnel could contact them.

The lift team was formally named the Lift Assist Team (LAT), with emphasis on the word "Assist." LAT members were expected to work with nursing personnel to perform patient-handling tasks, with nursing personnel providing expertise on patients' physical limitations and care needs. LAT members kept a log of all activities. For each task, the signature of the nursing staff member who assisted was obtained. LAT members also turned patients in bed as scheduled. Their other responsibilities included preparing lift equipment to move patients, assisting unit staff in cleaning equipment, changing and charging equipment batteries, and ordering and stocking equipment supplies.

LAT member training about transfer techniques, use of each available lift or transfer device, body mechanics, and stretching exercises combined the efforts and expertise of the Ergonomics Division and the hospital's Physical and Occupational Therapy (PT/OT) Department. LAT members and nursing personnel also attended a hospital-wide training session about peer leadership and the use of lift equipment.

Following the 3-month pilot project, neuroscience unit managers chose to continue the LAT program, paying for it from their budgets. LAT members continued to be supervised by their manager in the patient transporter office. During the 3 years of this case study, the LAT has retained the same areas of service and formal responsibilities, but has experienced some turnover in members.

Data Sources

Various sources of data were used to describe the implementation, adoption, and experiences of the LAT. In addition to the focus groups and LAT task logs detailed below, monthly meetings with the hospital's Ergonomics Division before LAT formation were helpful in understanding development and implementation of the LAT, as well as the context in which the LAT was created and sustained.

Focus Groups. Focus groups were conducted separately with LAT members and nursing staff from the neuroscience units to better understand the move to a minimal manual lift environment; formation, implementation, and integration of the LAT; and patient lift and transfer equipment. The focus groups were conducted in fall 2006 and fall 2009. The authors developed semi-structured guides to initiate discussion topics and inquire about particular details. Neuroscience nursing staff were recruited through informational flyers on the units, and LAT members were recruited with assistance from their manager. Focus group participation was voluntary, and participants received $25 for their time. Following informed consent, focus groups were audio recorded, participants were identified using a number or an alias, and tapes were transcribed verbatim.

LAT Daily Task Logs. The hospital's Ergonomics Division provided data from the LAT daily task logs. These data included the number of patient assists per day for each member of the LAT from July 1, 2007, through August 31, 2009.

Analyses

Data from the LAT task logs were imported into SAS software (SAS Institute Inc., Cary, NC) and descriptive statistics were generated. Electronic focus group transcripts were imported into qualitative data analysis software (QSR International Pty Ltd., Doncaster, Victoria, Australia) for coding. A "prestructured case" approach (Miles & Huberman, 1994) was used to code data based on the semi-structured guide topics and other topics of interest arising during the coding process.

All procedures were approved by the Institutional Review Board of the university.

RESULTS

Between July 2007 and August 2009, the median number of daily assists was 10 (range, 0 to 40). No significant difference was identified between weekdays and weekends ($p = .39$). The median number of daily assists decreased over time, from 12 in 2007 to 9 in 2009 ($p < .05$).

Focus Groups

Two focus groups were conducted in fall 2006 to gather data related to experiences of implementing the LAT—one with LAT members and another with nurses and aides from the neuroscience units. Two additional focus groups were conducted 3 years later with staff from the same

units. The number of participants per group varied from three to seven. Main themes addressed in all groups are discussed below.

Meaning of the Word "Assist." The term "assist" is literally at the center of the team's name. Nursing personnel were expected to work with LAT members. LAT members were instructed that assistance from nursing staff was a requirement, and they spoke of the importance of this requirement in keeping staff and patients safe. One team member said, "I always specify that we're not supposed to do the entire job for [nursing personnel]. They assist us. A lot of them [say], 'Oh, he could do it.' No, I can't, can't do it by myself." LAT members sometimes spoke of assistance as physical help: "If I'm operating this machine and I need [nursing staff] to hold this patient's arm or leg, then if there's nobody in with me, it could end up as an injury to the patient or to me." LAT members did refer to a continuum of physical assistance nursing staff provided. Some nurses were hands-on and used the lift equipment, whereas others would hold the bed sheet while the LAT member performed the task.

LAT members also described assistance in knowing about patients' conditions. "If [nursing personnel are] not in there with you to tell you, 'This person just had a hip replacement,' you don't know, and if you go in there and just rock and roll them over, you can cause big problems." Decisions about whether to use lift equipment and, if so, which piece incorporated this knowledge as well: "You've got to first find out what the nurse wanted to do with that patient. You can't go in there and tell the nurse what she is going to do with her own patient. Because she knows what is wrong with the patient . . . . She looks in the chart and she knows."

Job Satisfaction. LAT members described several differences between their job as a LAT member and that as a patient transporter that indicated enhanced job satisfaction. They described establishing relationships with patients that did not exist in their role as a transporter: "[Patients] know us. . . . They call you by name. . . . It is just like you are really a part of things." They also described the good rapport they established with nursing staff and how they had become part of the nursing group: "They took the wall down. There's not that separation anymore . . . . Before [as a transporter], it was not like that." In contrast to their role as a transporter, they described interacting regularly with unit nurses and managers and sharing mealtimes in the nursing staff break room as a LAT member. Similar to their relationship with patients, LAT members valued "knowing everyone on a first name basis" (versus having nurses say, "That's the guy who comes and takes people in and out of here").

Nurses also described benefits of the LAT, including improved staff safety and patient care. They valued LAT members, describing them as "personable," "professional" caregivers who "go above and beyond." Nurses knew the LAT members' names, something they acknowledged not knowing about the patient transporters. They spoke of an appreciation for having a group to help with patient lifts and transfers. One nurse expressed "you always feel like you are inconveniencing someone" when asking other nursing personnel for help with lifting tasks. The LAT, on the other hand, was seen as "designated to do that" and "not going out of their way to do it; that's what they are there to do."

The LAT was used as a recruiting strategy for nurses who were considering working on the unit. One LAT member said, "New nurses came in, the [nurse manager] would stop you in the hall and say, 'This is ___. He is with the lift assist team,' and let new nurses thinking about coming on [know]. And the nurses always say, 'Wow, you have a lift assist team?'"

LAT Member Qualities. LAT members and nursing personnel were both asked about qualities one should possess to be a LAT member. The LAT members highlighted dependability, responsibility, and commitment to job tasks. They perceived the decision of their manager to approach them with the opportunity to be on the LAT as based on their work ethic; they indicated their manager said they "could work without supervision."

Nursing staff highlighted LAT members' personable qualities and "good attitude," enhancing their ability to work well on the unit and with the patients. "Regarding tasks, they don't wait to be asked, don't waste time, don't mind doing anything, and don't question." Furthermore, "They're good with the patient . . . . They really are. They're well-mannered . . . . They say 'hello,' they give their name, ..."

Participants also discussed gender. One nurse noted, "If their managers or supervisors want to hire a female, I just suggest they hire a female that has a little bit of height. It's hard work." In a later focus group, when making suggestions about how to implement a lift team at another hospital, nursing staff highlighted the physical nature of the job and noted that members should be "all men." The LAT members spoke about gender in terms of patient-perceived safety, saying patients "don't want the women helping or [the patient will] get hurt. They want the men now."

Job Tasks and Workload. Compared to their role as patient transporters, LAT members highlighted their longer shifts and more physically demanding job tasks. They described their days as "busy," but with "gaps in between," and indicated workloads varied by unit and over time. They described their ability to work through challenges (e.g., prioritizing multiple calls). At this hospital, only one LAT member covered the three neuroscience units at any given time. Some LAT members preferred single-person coverage, specifying that if two LAT members were to cover the units at one time, nursing staff might be less likely to assist with patient-handling tasks. LAT members noted that having all three units on the same floor made

this single-person coverage feasible and enhanced response time, in part because LAT members did not need to use an elevator. "When you get a call, you have to be able to respond to it within 3 or 4 minutes. Otherwise, [nursing staff] are going to do [the lift/transfer] without you. And by trying to have us cover two floors, it's just not feasible." The issue of nurses not wanting to wait long for the LAT member to come to help with a lift was reiterated by nursing staff at a focus group 3 years later.

Most patient-handling tasks were related to repositioning, turning, or pulling patients up in bed rather than lifting or transferring patients with lift equipment. Other job tasks were related to maintaining the equipment and supplies. At times, LAT members were asked to perform tasks outside of their officially prescribed duties. A LAT member, on recounting being asked to move "dirty beds" off the unit, said he was "not sure we are supposed to, but, you know, I guess they just do that on us." LAT members had also been called to perform patient-handling tasks in other areas of the hospital, and they indicated they would assist if they had the time. The role of the LAT members was also unclear to nursing personnel.

Lift Equipment. LAT members received intensive training and expressed confidence in using lift equipment; equipment use was "clockwork" and "you know exactly what to do." LAT members perceived a lack of lift use, however, by nursing personnel on the units. They attributed this to unfamiliarity with the equipment, in part due to a lack of training: "There's only one or two people usually on some of these floors who know how to use [the lift equipment]. Some of the nurses are so busy they don't have time to show everyone, and they're not always on the same shifts." "And another thing, they don't feel comfortable using it." They echoed previous findings from focus groups with nursing personnel about time being a barrier to equipment use: "Some nurses say it's a waste of time because they're already in the room, instead of running out of the room and go get the equipment." "[Nursing personnel think] it's faster to go and get four to five nurses together and do it. That's what I've run into before."

When using the lift equipment, patient safety was a concern of LAT members. They highlighted situations in which they corrected nursing personnel on proper use of the equipment. "When [nursing personnel are] using it, I'm real quick to point out that, you know, you need to do it this way or do it that way. They don't get angry. They fall right in and say, 'Okay. Thank you.'" "We have some who are using the [powered-portable full-body sling lift]. They see us put the slings in between the patient's leg. They're trying to get by and put them on the outside. That's when that patient is going to slide. That's when you have to stop them right there. That isn't safe." LAT members also noted the need for better communication with PT/OT to inform decisions about equipment use: "[PT/OT] will tell somebody else, 'But have the lift assist team get [the patient] back.' Well, we don't know if this person's leg is messed up."

DISCUSSION

This case study provides an example of the development, implementation, and experiences of a LAT on three neuroscience units at a large medical center to reduce patient-handling injuries among nursing staff. Findings suggest benefits to the use of a lift team in terms of both nurse and LAT member job satisfaction, as well as patient safety and satisfaction. The LAT in this study appears to have been well-utilized and recognized as the group designated to assist with patient-handling tasks by nursing personnel. Recent publications offer examples in which lift teams are not called to perform lifts despite availability (Kutash et al., 2009; O'Malley et al., 2006), with some nursing personnel not wanting to "bother" the lift team members (Springer et al., 2009).

Focus group discussions with LAT members highlighted clear distinctions between the role of LAT member and that of patient transporter. LAT members were directly involved in aspects of patient care. They made decisions based on patient safety, at times guiding nursing personnel on proper lift equipment use to keep patients safe. Also, compared to their role as patient transporters, LAT members expressed enhanced job satisfaction due in part to their social integration on the nursing units. Working regularly on the same units, they were able to know patients and patient care staff in a way not possible in their patient transporter role. Patients and nursing staff knew LAT members by name. Enhanced job satisfaction was echoed among nursing personnel on the units, who noted using the LAT as a recruitment tool for nurses.

The positive relationships described between the nursing personnel and the LAT members may adversely affect LAT members' risks associated with patient-handling injury. Previous research among patient care staff in a long-term care setting reported an increased risk of injury among more socially integrated health care workers (Myers, Kriebel, Karasek, Punnett, & Wegman, 2007). Such integration of LAT members on the nursing units, coupled with their lower ranking in the occupational hierarchy, may result in broader demands by nursing staff; LAT members familiar to the nursing staff may be asked to extend themselves beyond the scope of their defined duties during the performance of particular tasks or when workload is high. Also, nurses highlighted the physical nature of the work and suggested that lift team members be male. With these cultural stereotypes in place, simply being male in a predominantly female work group may make the LAT members more likely to be asked to perform physically demanding, high-risk tasks (Messing et al., 2003). Related to the issue of LAT members being asked to perform tasks outside their defined role, researchers have noted concerns that lift team members will not be able to meet the lifting demands for which

the team was established (Hefti et al., 2003). The researchers highlight another concern related to social integration and gender-based differences in expectations—the safety of lift team members.

The lift team in this study was implemented in the context of a broader intervention that included placing patient lifting devices on inpatient care units. Adoption of lift and transfer equipment hospital-wide was studied as part of the larger project of which this study was a part, and findings indicate adoption has been limited and variable (Schoenfisch et al., in press). Barriers to equipment adoption include lack of training, complex issues surrounding time, and patient conditions precluding use. Considerable efforts were made during the development of the LAT to ensure the members were competent and confident in the use of patient lifting devices. On the neuroscience units, the LAT members provided guidance to nursing staff on proper equipment use to keep patients safe. It is unclear, however, if the LAT's use of the equipment stood in the way of equipment adoption among nursing staff. If LAT members are performing most of the tasks related to lift equipment maintenance and use instead of nursing staff, the latter may potentially remain less practiced and capable in equipment use.

As with this LAT initiative, lift teams are often implemented with the goal of reducing patient-handling injuries among nursing personnel. As part of the broader study under which this research was conducted, data from workers' compensation records were coupled with data on time at risk, allowing for the calculation of work-related injury rates among patient care staff at the medical center. However, when restricted to neuroscience nursing personnel, too few data points were available to measure the impact of the LAT on patient-handling injury rates among these workers. Also, the researchers were not able to detail the injury experience of LAT members with these data.

IMPLICATIONS FOR PRACTICE

Efforts are needed to reduce patient-handling injuries among nursing personnel, and lift teams may be an effective means of achieving this goal. Benefits of a lift team include enhanced job satisfaction among nursing staff and lift team members, as well as patient safety and satisfaction.

Requiring patient lifts and transfers to be a collaborative effort between nursing staff and lift team members may influence lift team members' level of involvement in direct patient care, level of social integration on the unit, and recognition of their role in patient safety. This collaborative role may also allow a lift team to influence adoption of other interventions designed to prevent patient-handling injuries among patients and their caregivers.

In addition to capturing injury data for nursing staff, the health and safety of lift team members must be considered. Lift team members are sometimes chosen from patient care groups documented to have high injury rates (e.g., orderlies, nurses' aides, or patient transporters). High rates of musculoskeletal injuries and disorders were observed among patient transporters at this hospital from 1997 through 2003 (Pompeii, Lipscomb, Schoenfisch, & Dement, 2009). Even with lift and transfer devices available for use, manual handling may still be the only option for physically demanding tasks performed by lift team members, depending on patients' needs and the scope of the lift team's defined job duties. In addition, as lift teams become more integrated on nursing units, nurses' familiarity with lift team members, coupled with lift teams' availability and lower rank, could lead to their performing tasks beyond the scope of their defined duties. Furthermore, for male lift team members, simply being male in a predominantly female work group may increase their likelihood of being asked to perform high-risk tasks. Understanding the exposure and injury experiences of lift team members is therefore significant in terms of evaluating not only the implementation and effect of lift teams on the injury experience of nursing personnel but also whether the risk of injury is simply being transferred from nursing personnel to lift team members. Active, ongoing, long-term exposure and injury surveillance is needed for this small group of workers.

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CE Answers
Vaccine Cold Chain:
Part 1. Proper Handling and Storage of Vaccine
August 2010

1. C	6. B
2. A	7. C
3. B	8. B
4. C	9. D
5. D	10. A