

Maintaining Quality Care during a Nursing Shortage Using Licensed Practical Nurses in Acute Care

Implications of an aging registered nurse workforce, coupled with an inadequate supply of new nurses, presented a unique challenge for the nurse executive in an acute care hospital. This article presents one possible solution: reintroduction of licensed practical nurses to the patient care setting. It describes a pilot project initiated to answer the following question: Is there a change in quality of patient care or staff satisfaction when the nursing care delivery system adds a licensed practical nurse to the registered nurse and patient care assistant care pairs? It also describes the driving forces behind this practice change and presents focus group discussions, the implementation process, and conclusions and recommendations. *Key words: licensed practical nurses, nursing shortage*

Patricia A. Kenney, MSN, RN
*Cardio-Pulmonary Clinical
Nurse Specialist
Saint Michael Hospital
Milwaukee, Wisconsin*

INTRODUCTION

A pilot project initiated in response to the nursing shortage supported hiring the licensed practical nurse (LPN) into available float pool positions at one acute care hospital. Recommendations are made for other organizations considering adding LPNs to staffing mixes.

BACKGROUND

The future of health care is in crisis given the shortage of registered nurses (RNs). This shortage is anticipated to increase over the next 10 to 20 years. The study by Buerhaus¹ and colleagues found the overall number of

The author wishes to express a special thanks to Sue Straub, Nurse Executive who had the vision to support the project and Dr. Mary Hagle who assisted with the design of the study. Grateful acknowledgment is given to Jane Cerra, BSN, RN, Beth Johnson, MS, RN, Janet Knutson, BSN, RN, Paula Malloy, BS, RN, Jennifer Niederstadt, MSN, RN, Paula Shows, BS, RN, Gloria Wood, MSN, RN and all the 3 North and 4 North nurses, patient care assistants, unit co-ordinators and physicians.

Journ Nurs Care Qual 2001;15(4):60-68

full-time equivalent (FTE) RNs per capita will reach a peak in the year 2007 and will continue to decline until 2020. A steadily aging workforce that is not being replaced by new individuals interested in pursuing nursing as a career is the primary factor causing the shortage. Buerhaus recommends to employers and nursing leaders that they begin working together now to plan how to efficiently use increasingly scarce RNs to deliver patient care in the future. In addition, ergonomically sensitive strategies should be considered for the older RNs' susceptibility to neck, back, and foot injuries and their potential reduced capacity to perform some of the physical tasks required.¹

Nationally, baccalaureate nursing programs have experienced declining enrollment for the past 5 years.² National League for Nursing statistics show associate degree and diploma programs also experiencing declining enrollments.³ The need for health care has increased due to several factors: the population increased 1 percent per year, older people are living longer due to new technologies and treatments, there are more antibiotic-resistant infections, and there are more chronic illnesses. This leads to the need for greater access to health care; in turn, that creates the need for more health care services.

Managed care requires hospitals to be creative in order to compete in today's market. Restructuring health care delivery systems in response to managed care and fixed-payment agreements is commonplace. Historically, both the LPN and patient care assistant (PCA) have been used in staffing mixes to alleviate nursing shortages and contain costs. There are a plethora of articles discussing the challenge nurse executives face today to maintain quality, improve outcome, retain costs, and recruit staff in a manner that is economically sensitive and creative.

DRIVING FORCES

A debilitating flu strain last winter that filled hospitals in the Midwest and reduced available staff forced the community to experience the nursing shortage earlier than anticipated. Various financial and flexible scheduling incentives were not sufficient to meet the demand for nurses, requiring increased levels of overtime. Innovative strategies consisted of having individuals representative of various disciplines, such as physical and occupational therapy, help nurses care for the patients. Nurse administrators were back at the bedside. Reflecting on this experience, it was positive because the mission and commitment to care for the patient were lived out. Whatever it took to keep the patient the focus and provide holistic care was done. The outcome was that patient care teams were cohesive, relationships with other departments were developed, and quality care was maintained. Despite these positive outcomes, it was crisis intervention, forcing us to look at our staffing pattern during high-census periods and plan for an imminent nursing shortage.

ALTERNATIVE STAFFING PROJECT

The nurse executive called together an ad hoc committee to brainstorm strategies on how best to deliver quality care during peak census coupled with nurse shortages. This committee consisted of nurse managers, clinical educators, clinical nurse specialists, and staff nurses from the medical and surgical units. Various long- and short-term strategies were discussed and debated.

A review of the literature identified a variety of work redesign initiatives to alleviate the consequences of nursing shortages along with recommendations designed to increase the future supply of RNs. Many of the strategies suggested already existed within

the system (e.g., recruitment bonuses, market research to adjust salaries and differentials, loan forgiveness programs for nursing students, closer collaborative relationships with schools of nursing, clinical placement and preceptors for nursing students, and recruitment of more diverse individuals extending to outside the United States). Often the long-term solutions are more controversial because they include substituting other personnel for the RN, which is an approach that is strongly opposed.

Historically, both the LPN and PCA have been used in staffing mixes to alleviate nursing shortages. The national trend is to provide additional training and education to licensed and unlicensed assistive personnel to perform various procedures that include medication administration. There is discussion in several states that the PCA may not be able to administer medication in the future; therefore, this option was not considered.

The LPN had been part of the delivery system in this hospital 20 years ago and had assisted the RNs in delivering quality patient care. The committee reflected on both positive and negative experiences with multiple care providers at the bedside. A pilot project on the medical and surgical units using LPNs from a temporary agency would provide data to determine if quality of care and staff satisfaction remained constant. The intent was not to reduce budgeted positions for the RN or PCA; instead it was to plan proactively for the future nursing shortage without compromising quality of patient care.

Patient satisfaction, treatment and medication errors, and falls were used as the indicators to evaluate the effects of a new delivery model. According to Heinemann and associates,⁴ these outcomes reflect the technical and interpersonal aspects of nursing care and are, to some extent, amenable to nursing intervention. A survey was distributed to all staff both before and after the pilot

to measure staff satisfaction. The survey did not have established validity or reliability and was not LPN specific. It was a tool that was used by the hospital in the past.

It was determined that the workload for the RN could not exceed the usual staffing ratio without adding additional bedside assistance for the RN. Some of the current tasks performed by the RN could be carried out by less skilled staff. Commitment was made by the team that the RN would continue to carry out those functions that only a registered professional nurse could do. The LPN would complement the RN-PCA dyad, not substitute for their roles or responsibilities. Once the decision was made to use LPNs, the committee needed to discuss how they could best assist the patient care team. A list of activities for the LPN was identified based on the National Standards of Practice for the Licensed Practical Nurse.⁵

IMPLEMENTATION OF THE LPN PILOT PROJECT

Change theory provided the foundation that led the committee to structure the initiative. The culture on the medical and surgical units is different, and focus group discussions evolved around the needs of the units. It was known that without buy-in from staff, the project would fail. Focus group discussions led by the clinical nurse specialists were held on both units in order to dispel any misconceptions and allay anxiety that jobs were being eliminated. In addition, a goal was to involve all the staff in planning for the pilot. A decision was made to pilot the project on both of the 52-bed medical and surgical units because both units work together, share staff, and utilize one charge nurse. Feedback was needed from both units to determine if the project was successful. Two LPNs were hired for the medical unit and one LPN was hired for the surgical unit. All staff

who worked days or rotated to days had an opportunity to work with the LPNs.

The role of the LPN was discussed in relationship to complementing the existing skill mix and not substituting for an RN or PCA. Differences in educational preparation and scope of practice for the LPN were described and discussed. Volunteer RNs were initially sought to work with the LPNs during the 3-month pilot. Delegation of activities within the competencies and scope of practice of all team members was discussed. The delegation and supervisory function of the RN when working in a multidisciplinary environment presented a challenge for some nurses not skilled in delegating tasks. The change from a modified primary nursing environment to delegating tasks to others while assuming responsibility for more patients was resisted by some.

An orientation for the LPNs was developed, and competencies were written. The LPNs selected after screening were from a temporary nursing agency that agreed to participate throughout the 3-month project. The clinical educator conducted the orientation for the LPNs, and competencies were evaluated through use of a 39-item Self-Assessment Tool. The committee met every other week during the pilot and evaluated the progress and outcomes of the project.

DAILY ROLES AND RESPONSIBILITIES

The charge nurse made out the daily assignment based on a prepared staffing grid. A team of two RNs, one LPN, and two PCAs were allocated to a group of approximately 16 patients. The RN delegated tasks to the LPN and PCA consistent with their educational level, skill, and experience. The LPN did not receive a specific patient assignment; instead he or she worked with a maximum of 16 patients performing various functional tasks. Usually

the LPN administered all the oral and intramuscular medications on the medical floor and participated in more procedures in addition to administering medications on the surgical floor. The assignment could be tailored to the needs of the unit and the acuity of the patients. A team conference held at the beginning of the shift identified how best to utilize the members of the team. For example, if there were very time-consuming patients who had multiple drains, dressings, or suctioning needs, the LPN's assignment would reflect a focus on those procedures instead of medications. The leadership team, consisting of the unit manager, clinical educator, and clinical nurse specialist, was available for questions, conflict resolution, and support.

The PCA functioned as a support to the nurse and performed tasks such as assisting the patient with daily hygiene, functional activities of daily living, patient comfort, vital signs, accuchecks, intake/output, and simple dressing changes. A list of tasks that the PCA and LPN could be delegated is presented in Table 1.

The RN is the coordinator of care who performs initial assessments of patients and initiates the plan of care based on the standards of care. Evaluation of a patient's progress toward desired outcomes is measured by the RN. Assessments of the patient with changing conditions, collaboration with the case manager, critical decision making, and initial patient teaching are additional examples of activities completed by the RN. Supervision of delegated tasks to the LPN and PCA was critical to the success of the project. Care decisions were based on the hospital's mission, vision, and values, which keep the patient and family as the primary focus.

DATA COLLECTION

Indicators that measured quality of care included number of medication and treatment

Table 1. List of duties by job position

Patient care assistant with advanced training tasks	Licensed practical nurse tasks
<ul style="list-style-type: none"> • Intravenous (IV) site care, IV discontinuation • IV care: Prime tubing, calculate IV credits, and clear pump • Warm moist compress • Foley catheter care • Specimen collection • Enemas • Nasogastric tube maintenance: Tube feeding, residuals, and placement; gastric tube site care • Stage I pressure ulcer care • Oral suction • Empty colostomy bags, hemovacs • Open sterile packages, apply sterile gloves, simple sterile dressing change • Restraint application • Assist with functional activities • Orient patient to hospital • 12-lead electrocardiogram • Glucometer reading • Change oxygen regulator • Assist with incentive spirometry • Pulse oximetry reading • Document data collected 	<ul style="list-style-type: none"> • Urinary catheter insertion and care • IV catheter insertion and care • Nasogastric tube insertion and care • Chest tube maintenance and monitoring • Pacemaker wire care • Epicardial wire care • Pressure sore prevention and care • Gastric tube monitoring, feeding, and care • Glucose meter reading • Specimen collection • Pulses, doppler • Ostomy care and management, except new surgical • Drain management • Minor and complex wound care • Data collection for head-to-toe assessment • Medication administration: by mouth, IV, intramuscularly, and selective IV piggy back medications • Respiratory management: suction, trach care, pulse oximetry, incentive spirometry • Restraint application • Co-check blood with registered nurse (RN) • Continuous Passive Motion (CPM) machine application and monitoring • Orthopedic positioning, traction

errors, patient falls, and patient satisfaction surveys. The hospital contracts with an outside agency to gather data on patient satisfaction. A professional research consultant group provides data on discharged patients monthly. These data are transferred onto control charts and analyzed and trended over time. Data on patient falls, treatment, and medication errors are collected on incident reports that are submitted to the quality improvement department. Data are transferred onto control charts and analyzed based on control chart trends. Staff surveys were completed before and after the project to determine if staff satisfaction was maintained.

EVALUATION

The alternative staffing pilot project design was planned collaboratively by the committee and implementation task force. Data were collected to answer the following question: Was the current level of excellence in patient care maintained, as measured by the number of treatment and medication errors, patient falls, and patient satisfaction surveys?

Data related to medication/treatment errors and patient falls were retrieved from incident reports. Number of treatment/procedural errors and patient falls remained stable as illustrated in Figures 1 and 2. The

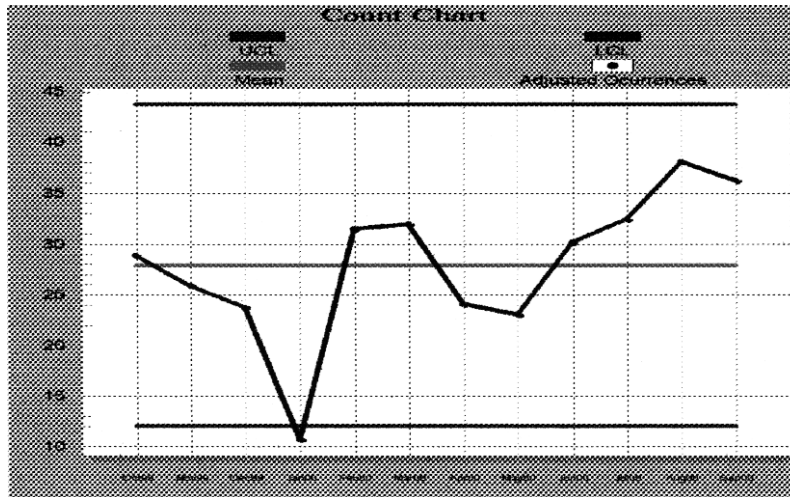


Figure 1. Treatment and procedural errors.

study period began in February and ended in May.

Patient satisfaction surveys were completed by an outside agency using a standard survey tool. The overall satisfaction with nursing care on both the medical and sur-

gical units was consistent with scores obtained over a 21-month period of time as illustrated in Figures 3 and 4. Additional attributes were studied using control charts, and there were no indications that there were any negative effects on patient satisfaction.

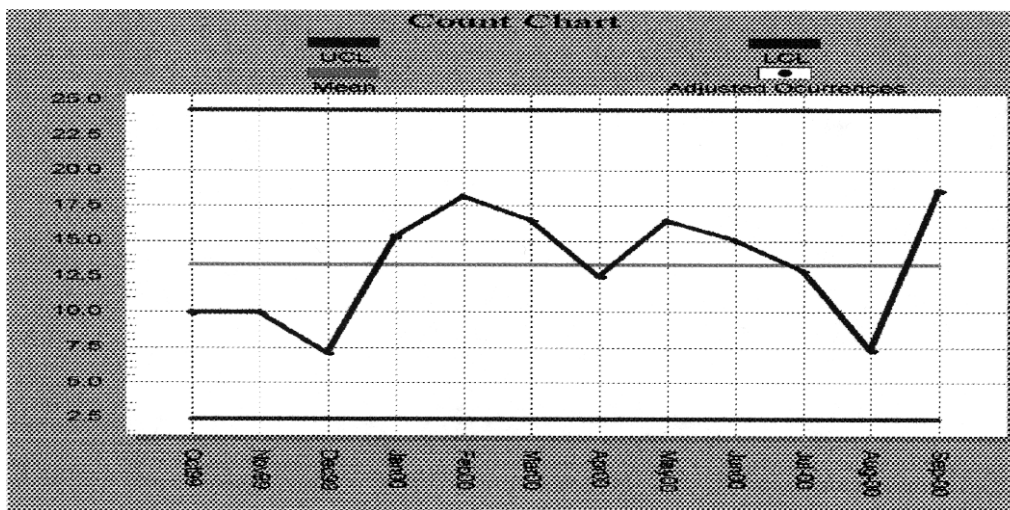


Figure 2. Chart of falls per month.

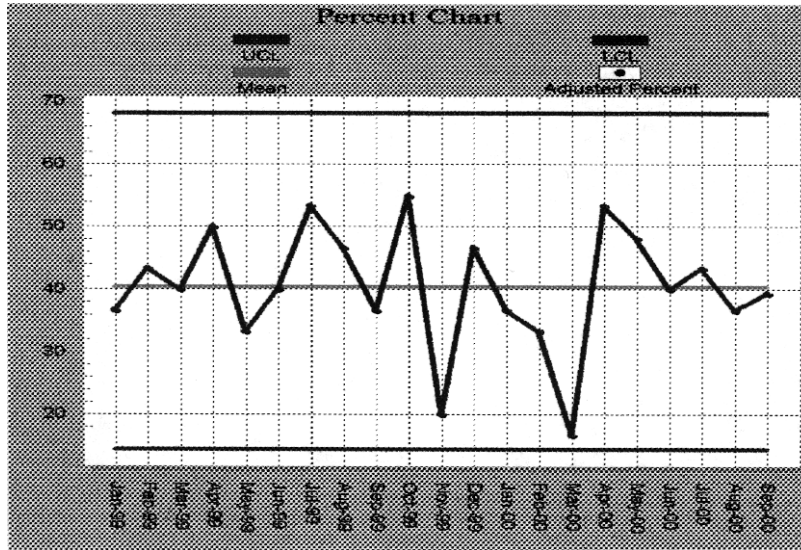


Figure 3. Medical unit: Percentage of patients rating care as excellent.

WAS STAFF SATISFACTION MAINTAINED?

Staff surveys were distributed to all staff members before and after the pilot. Twenty-

four RN surveys were returned before the pilot, and 20 RN surveys were returned after the pilot. The numbers remained stable and with little variation. Responses during discussions at unit meetings indicated minimal

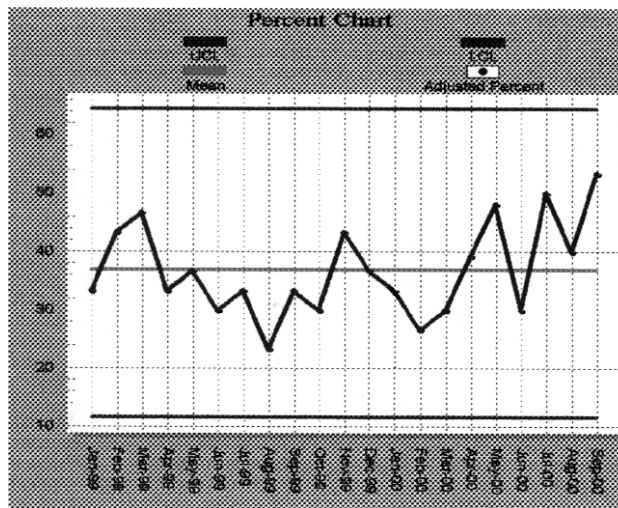


Figure 4. Surgical unit: Percentage of patients rating care as excellent.

concerns related to LPN practice and positive comments overall regarding working with an LPN. Primary concern expressed was related to RNs still being responsible for greater numbers of patients, even though the LPN was acknowledged as helping with tasks a great deal. Some nurses preferred not to work with an LPN due to concerns about accountability. Other nurses became good friends with the LPNs once a level of trust was established. The survey did not address specific questions related to LPNs; instead, it asked general questions about quality of patient care and factors that foster nurse satisfaction such as interpersonal relationships, administrative climate, and salary.

Twenty-two PCA surveys were returned before the pilot, but only seven were returned after the survey. PCA scores were similar to the RN ratings, and job satisfaction remained stable throughout the pilot. The main concerns expressed were: "too many bosses telling us what to do" and job stability if LPNs were to return to the skill mix.

The LPNs rated the experience fair to excellent. Two of the three contracted LPNs would prefer total patient care compared to performing delegated tasks. LPN relationships with staff were positive, and the LPNs indicated this was a good place to work. Trust between the RNs and LPNs was gradually established and contributed to positive interpersonal relationships. LPN dissatisfaction was expressed with the limited scope of practice and working with RNs who lacked respect for their role.

SIX MONTHS LATER

Six months subsequent to the hospital hiring the three LPNs into the float pool, the situation is still positive. The orientation is tailored to the needs of the LPN and promotes self-confidence and satisfaction with

new role. The LPNs are available to support RNs and PCAs in the care of assigned patients. The LPNs currently rotate between first and second shift because of the number of medications and procedures on those shifts. A team conference at the beginning of the shift to focus on outcomes and assign tasks to appropriate team members is essential to clarify roles and discuss patient priorities. The professional nurses lack job satisfaction when tasks are not completed that were delegated. Responsibility for more patients without good ancillary support produces anger and frustration. The RNs have learned that clearly communicating expectations about tasks to LPNs and PCAs and ensuring that tasks are completed are essential in the delegation process. The nurse manager is available for support ensuring team responsibility and accountability.

It is a challenge to create a caring environment that promotes positive interpersonal relationships among staff and strives to maintain excellence. The pilot enabled the team to learn how to utilize the strengths of the LPN efficiently. The role of the LPN is established and perceived as a positive alternative to the RN-PCA care pair during periods of high census and nursing shortages. Professional nurses generally prefer the primary nursing care model when given an option. We continue our aggressive recruitment and retention initiatives. The critical care unit is currently working on defining the role of the LPN to assist the RN in critical care when the census is high.

RECOMMENDATIONS FOR OTHER ORGANIZATIONS

Based on the pilot project, the following recommendations are made:

- Include staff in planning and implementing a project from its inception to

support change, build trust, and dispel any misconceptions.

- Use focus group discussions as they provide an opportunity for team members to discuss concerns and resolve conflicts.
- Educate staff related to consequences of the nursing shortage using actual statistics.
- Remember that nursing students need to learn and practice delegation skills as part of their basic curriculum.
- Recall that organizational structures that require PCAs and LPNs to be responsible care providers and hold them accountable for excellence support the RN's ability to delegate efficiently.
- Remember that organizational structures that educate and mentor the RN on leadership and communication skills prepare the professional nurse for team nursing.
- Use case studies and role play to educate the inexperienced RN to supervise and delegate proficiently.
- Educate all personnel on the roles and responsibilities of different caregivers.
- Discuss the role of the professional nurse as coordinator and supervisor of care.

- Structure practice based on the mission of the organization and the commitment to care for the patient as a team.

SUMMARY

Overall, there was no change in quality of care or staff satisfaction, which served to support the hiring of LPNs into available float pool positions. The strategy of delegating some tasks to less skilled staff such as the LPN is a worthwhile approach to capitalize on the unique education and skills of the professional nurse. A self-directed LPN who is well prepared for the role is an asset to the team. Conflict occurs with poor communication, insecurities, and role confusion. The RN who lacks leadership and communication skills has difficulty operationalizing the role of the professional nurse as coordinator and supervisor of care. Working collaboratively with the nurse manager, supporting each other, and communicating expectations clearly will prepare the professional nurse to supervise and delegate based on a clear understanding of roles, responsibilities, and boundaries. The positive outcomes of this quality improvement project could assist other nurse executives as they plan how best to use the scarce supply of RNs to deliver patient care in the future.

REFERENCES

1. P. Buerhaus, D. Staiger, D. Auerbach, "Implications of an Aging Registered Nurse Workforce," *Journal of the American Medical Association* 283, no. 22 (2000): 2948-2954.
2. *1999-2000 Enrollments and Graduations in Baccalaureate and Graduate Programs in Nursing* (Washington, DC: American Association of Colleges of Nursing).
3. G. Bednash, "The Decreasing Supply of Registered Nurses: Inevitable Future or Call to Action?" *Journal of the American Medical Association* 283, no. 22 (2000): 2985-2987.
4. D. Heinemann et al., "Partners in Patient Care: Measuring the Effects on Patient Satisfaction and Other Quality Indicators," *Nursing Economics* 14, no. 5 (1996): 276-285.
5. Board of Nursing. Standards of Practice for Registered Nurses and Licensed Practical Nurses, *Wisconsin Administrative Code*. Statutes 35. Chapter N 604.