E-Learning to Ease the Nursing Shortage:
A New Model for Transitioning Licensed
Vocational Nurses (LVNs) to Registered Nurses (RNs)

Dr. Carol Diminnie
Professor of Management Sciences
Angelo State University, San Angelo, Texas, USA

Dr. Linda Ross
Regional Director for Laura W. Bush Institute for Women's
Health and Assistant Clinical Professor of Nursing
Angelo State University, San Angelo, Texas, USA

Background

The United States is in the midst of a nursing shortage due to a rapidly aging workforce, the aging of current registered nurses (RNs), and a shortage of nursing faculty in the colleges. Despite the current easing of the nursing shortage due to the recession, one source projects the U.S. nursing shortage to grow to 260,000 registered nurses by 2025 (Buerhaus, July/August 2009), while the U. S. Bureau of Labor Statistics published in the November 2007 *Monthly Labor Review* that more than one million new and replacement nurses will be needed by 2016. Between 2011 and 2020, an estimated 55% of the registered nursing workforce is expected to retire (Hadler et al, 2006). Currently 72% of hospitals nationwide report an average vacancy rate of 12% (Siler, DeBasio & Roberts, 2008).

Texas is no exception. By 2020, Texas will be short an estimated 52,000 nurses. Nursing programs will have to double their current enrollment to meet the demand by 2020 (Texas Higher Education Coordinating Board, 2006). The projected need for new RN graduates is a real dilemma facing nursing education and the healthcare workforce. Rural Texas hospitals have reported an RN vacancy of 15% in recent years (Texas Center for Nursing Workforce Studies, 2006).

Many nursing programs are at capacity and unable to admit qualified applicants. In Texas, 200 additional nursing faculty are needed annually to meet the demand for additional nursing students. This shortage of nurses will ultimately impact the quality of patient care. Therefore, innovative, accelerated solutions to provide more RNs to address this potential crisis are needed.

The Problem

One population that essentially has been overlooked in meeting the nursing shortage is the Licensed Vocational Nurses (LVNs). LVNs care for people who are sick, injured, convalescent, or disabled under the direction of physicians and registered nurses. Their state-approved training program usually lasts about a year, after which the student must pass a national licensure exam. There are 77,117 LVNs in Texas, with over 18,000 working in hospital settings (Texas Department of State Health Services). The LVN profession is among the few health professions where Texas exceeds the U.S. average for provider-to-population ratios. Why do not more LVNs train to become RNs to help alleviate the registered nurse shortage?

The vast majority of LVNs must maintain full-time employment in order to provide for themselves and their families. Traditional LVN-RN programs are campus-based, full-time 12-15 month programs. Many LVNs cannot continue their education on a full-time basis because they cannot afford to quit their job, losing pay and/or benefits. Hence, the full-time programs are having difficulty attracting and graduating students. The Licensed Vocational Nurses express frustration over not being given "credit" for their LVN educational experience and education, being required to repeat didactic (knowledge based) nursing experiences in the traditional LVN-RN program.

Hospitals have expressed dissatisfaction with "alternative" LVN-RN options because of their cost, lack of clinical experience, and a sense of isolation from the educational process of their employee. What is needed is a reputable, quality LVN-RN program which takes less time than the traditional program, allows the student to remain employed with benefits for the duration of the program, and gives the student credit for demonstrated competence in nursing skills learned in their LVN training.

The Solution

Angelo State University (ASU), San Angelo, Texas, proposed a new model for the LVN to RN transition which meets all these requirements. Funded by a $1.27 million grant from the Texas Higher Education Coordinating Board, ASU partnered initially with four community hospitals in rural West Texas to develop and implement a new model LVN-RN program in which the working LVNs would be able to "go back to school" to earn their associate degree in nursing.

Initial partnerships were formed with four hospitals in West Texas: San Angelo Community Medical Center (San Angelo, TX), Shannon Medical Center (San Angelo, TX), Scenic Mountain Medical Center (Big Spring, TX) and Brownwood Regional Hospital (Brownwood, TX). The program has expanded to include 14 hospitals at the current time, with five more hospitals to come on board in July 2010.

The objectives of the new model were to:

1. Allow LVNs to remain employed full-time with full salary and benefits while completing their studies.

2. Decrease the time of completion by 50%.

3. Develop asynchronous, on-line courses to cover the didactic content.

4. Identify on-line study materials for mental health, obstetrics, and pediatric competency exams, so the LVNs could earn credit for material studied in their LVN educational program.

5. Identify on-line tests for mental health, obstetrics, and pediatric competencies.

6. Develop asynchronous, on-line course tailored to the hospital preceptor who will supervise the specific individualized competency development of the LVN who is transitioning to the RN role.

7. Provide one-on-one supervision (precepting) of the LVN student by a hospital RN preceptor.

8. Develop an LVN-RN Competency Transcript which includes the RN hospital orientation competencies.

9. Increase hospital staff involvement with the LVN to RN transition educational process.

The Model

In the summer of 2008, Angelo State University formed partnerships with four area hospitals to design and implement an innovative, cost- and time-efficient, competency-based LVN-RN transition program. This program allows working LVNs to "go back to school" on-line to earn their associate degree in nursing without sacrificing salary and benefits. The ultimate goal of this project is to increase the number of RNs providing nursing care to the citizens of Texas, especially those Texans living in rural areas, by training LVNs employed by the partner hospitals.

Unique features of this model include:

1. A decrease in time of completion from the traditional campus-based full-time model by 50% (from 42 to 21 weeks).

2. Students given credit for course work in mental health, obstetrics, and pediatrics after passing competency tests in these areas.

- MyNursingLab^{TM} from Pearson Education© selected to help prepare students to pass online testing through the National League of Nursing© to show competency in the didactic content of mental health, obstetrics, and pediatrics (material the students had covered in their LVN education).

  ➢ Pre- and post-testing

  ➢ Study plan

  ➢ Interactive video

  ➢ PowerPoint

  ➢ Online Instructor Resource Manual

  ➢ Student E-book

- National League of Nursing© (NLN) on-line tests selected for competency testing.

3. Didactic content delivered and evaluated through online courses.

- Creation of on-line versions of RNSG 1227 Transition from Vocational to Professional Nursing I and RNSG 2427 Transition from Vocational to Professional Nursing II. Students study didactic course work on their own time.

  ➢ Articulated PowerPoint

  ➢ Discussion board

  ➢ Clinical logs/reflection

  ➢ On-line support for textbook

- Blackboard 8.0 Course Management system chosen as the platform for the on-line delivery of courses.

4. Hospitals provide an RN preceptor for each LVN student in the program. The preceptor is generally paid a stipend (which varies by hospital) for this role and is prepared for this responsibility by taking an on-line course (paid for by the hospital).

- Creation of an on-line course N4343 Role of the Clinical Preceptor for the hospital RN chosen to assist the LVN-RN student during the precepted clinical experiences.
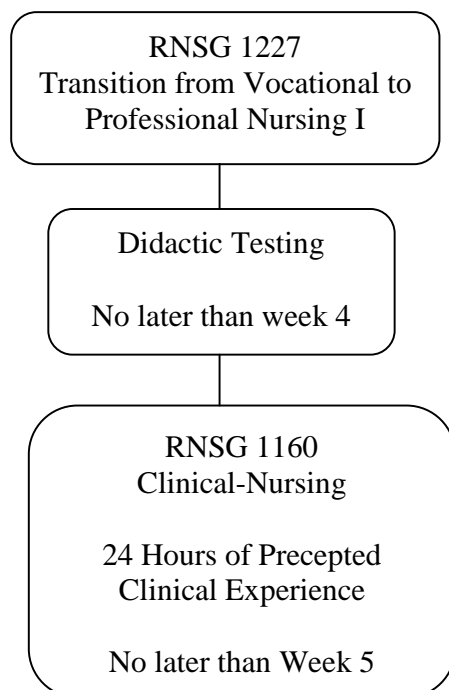
5. Hospitals pay tuition and fees, provide a paid 8-12 hour study day during the didactic portion of the program, and provide paid release time for completion of the clinical components. The grant pays the hospital $3000 per student to partially offset this expense.

6. Development of a project orientation program for hospital staff educators, RN clinical preceptors, and key hospital administrators. Hospitals now have a direct involvement in the educational process.
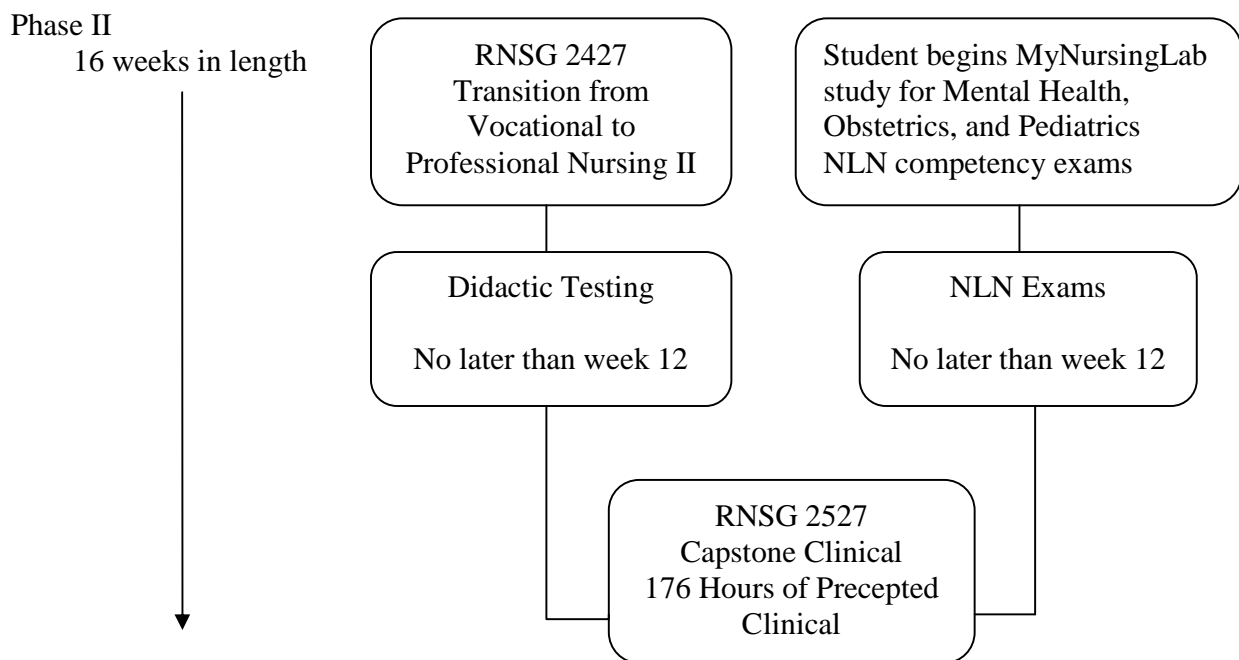
7. Adoption of an LVN-RN Competency Transcript which allows the hospital to reduce or eliminate the orientation time necessary for a new RN hire.

Curriculum Design

Phase I
5 weeks in length

RNSG 1227
Transition from Vocational to
Professional Nursing I

Didactic Testing

No later than week 4

RNSG 1160
Clinical-Nursing

24 Hours of Precepted
Clinical Experience

No later than Week 5

Upon successful completion of Phase 1, the student receives credit for the first year of AASN courses and moves into Phase II.

Phase II
    16 weeks in length

| RNSG 2427 Transition from Vocational to Professional Nursing II | Student begins MyNursingLab study for Mental Health, Obstetrics, and Pediatrics NLN competency exams |

| Didactic Testing — No later than week 12 | NLN Exams — No later than week 12 |

RNSG 2527
Capstone Clinical
176 Hours of Precepted Clinical

Upon successful completion of Phase II, as long as all graduation requirements are met, the student receives ADN degree and is eligible to sit for the NCLEX-RN Exam.

Success of the Model

Initially, four Texas hospitals signed on as partners. Two of the hospitals are in San Angelo, Texas (San Angelo Community Medical Center and Shannon Medical Center), one in Big Spring, Texas (Scenic Mountain Medical Center) and one in Brownwood, Texas (Brownwood Regional Hospital).

Fifteen LVNs made up the first cohort of students, who began classes in July of 2008. Over the next two years, five more cohorts (for a total of six cohorts) have been supported by the Texas Higher Education Coordinating Board grant, for a total of 88 students. With each new cohort, additional Texas hospitals came on board until, currently, 14 Texas hospitals have partnered with Angelo State University for this program.


Map of Texas, USA with 14 Partner Hospitals

As of June 1, 2010, five cohorts have completed the program and one is slated to graduate in August, when the grant funding ends. The average age of the student is 33.3, with a range from 20 to 59. The average length of time the student has worked as an LVN is 5.2 years, with a range from 0 to 30 years.

Through the first five cohorts, 58 out of 68 students (85.3%) have completed the 21 week program. This satisfied our grant objective of at least 85% of the students completing the program. Twenty students are currently enrolled in cohort 6.

As of April 1, 2010, of the 58 students eligible to sit for the national registered nurse licensing exam (NCLEX), 24 students passed NCLEX on their first attempt, 7 passed on their second attempt, 6 failed on their first attempt and have not yet retested, and 21 have not yet tested.
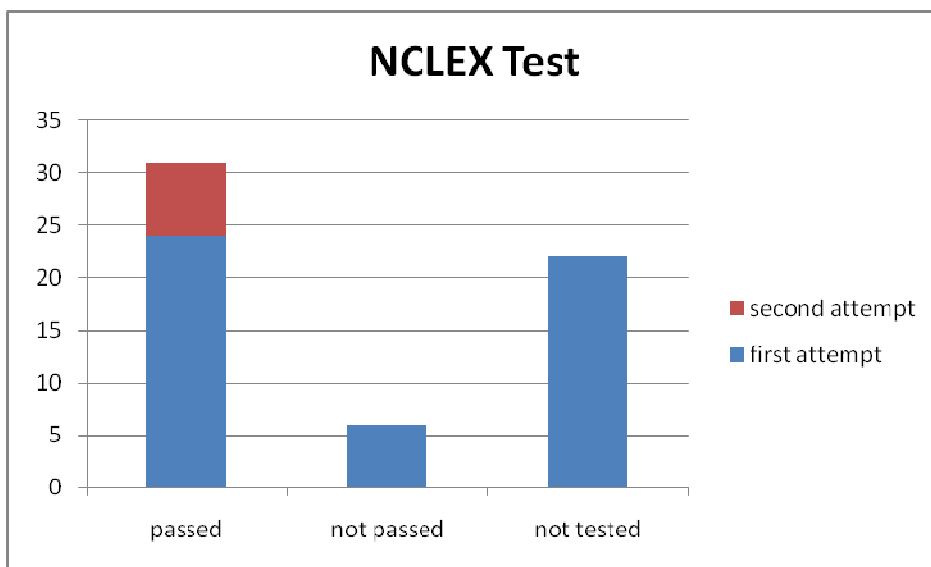
Student surveys indicate that the majority of the students would not have been able to participate in an RN program without this on-line program and the hospital partnership support. Remaining employed full-time and having flexible study time were critical elements to the success of the students.

While the cost to the hospital for tuition and fees, books, study material, testing, paid study time (currently reimbursed by the grant) and paid release time during clinical exceeds $11,000 per student, the benefits to the hospital far outweigh these costs. Depending upon the size of the hospital, cost savings for not having to recruit and orient new registered nurses is

estimated to range from $15,000 (for a small hospital) to over $40,000 (for medium to large hospitals). The new RN needs little or no orientation to the hospital (which often takes up to 16 weeks) because the RN satisfied the LVN-RN Competency Transcript while in clinical at the hospital. Hospitals do not need to hire expensive agency nurses to fill the vacant RN position. Further, RN attrition at the hospital decreases because a known, committed employee is now filling the RN position. Hospital administrators, educators, and nurse preceptors appreciate having a major role in the education of their new RN employee.

The Future

While the grant support for this new model ends with the graduation of cohort 6 in August, all of the existing partner hospitals plan to remain committed to supporting this program, even without the grant support. Further, an additional five Texas hospitals have requested to participate. A new cohort starting in July will have students from as far away as Houston in the program. Since the program is on-line, LVNs from across the state are asking their hospitals to contact us to begin this program. Some of the larger hospitals are phasing out the employment of LVNs and requiring all nurses to be RNs. This increases the demand for an accelerated program such as this.

References

American Association of Colleges of Nursing. (2008, September). *Fact sheet: Nursing shortage.*
Retrieved October 17, 2008, from American Association of Colleges of Nursing Web
site: http://www.aacn.nche.edu/Media/FactSheets/NursingShortage.htm.

Buerhaus, P., Auerbach, D., & Staiger, D., "The recent surge in nurse employment: causes and
implications," *Health Affairs*, 28, no. 4 (2009): w657-w668, published online 12 June
2009).

Dohm, A. & Shniper, L., (2007, November). Employment outlook: 2006-16: Occupational
employment projections to 2016. *Monthly Labor Review*, 86-125.

Feldman, H. & Jordet, C. (1989). On the fast track. *Nursing and Health Care*, *10*, 491-493.

Hadler, R., Saver, C., & Steltzer, T. "No time to lose," *Nursing Management,* 37(7):23-29, 48,
July 2006.

Lim, J., Kim, M., Chen, S., & Ryder, C. (2008). An empirical investigation of student
achievement and satisfaction in different learning environments. *Journal of Instructional
Psychology*, *35* (2), 113-119.

Robley, L., Farnsworth, B., Flynn, J., & Horne, C. (2004, September/October). This new house:
Building knowledge through online learning. *Journal of Professional Nursing*, *20* (5),
333-343.

Siler, B., DeBasio, N., & Roberts, K. (2008, November). PROFILE of Non-Nurse College

Graduates Enrolled in Accelerated Baccalaureate Curricula: Results of a National Study.

Nursing Education Perspectives, *29*(6), 336-341.

Texas Center for Nursing Workforce Studies. (2006) Texas Hospital Nurse Staffing

Survey:2006. Retrieved October 10, 2008, from the Texas Center for Workforce Studies

web site: http://www.dshs.state.tx.us/chs/cnws/2006HNSS.pdf.

Texas Higher Education Coordinating Board. (2006, November). *Strategies for increasing*

student completion rates in initial RN licensure programs. Retrieved October 10, 2008,

from Texas Higher Education Coordinating Board web site:

http://thecb.state.tx.us//GeneralPubs/Agenda/Ag2006.