

Nursing Education in Washington State

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Executive Summary

Goal

The goal of this paper is to provide information on the current condition of nursing education in Washington State in relationship to the health care needs of the residents of the state and to identify directions for nursing education that would more effectively support excellence in health care as Washington State moves forward in the 21st Century.

Background

Health care cost and access are major concerns facing the United States as a whole and Washington State reflects that national concern. Along with cost and access health care quality is increasingly being scrutinized. Nurses have been identified as key resources in improving access, cost containments, and quality. In order to meet its obligations to the public, nursing must continue to focus on high quality care that combines caring with knowledge and skill, the ability to synthesize knowledge from many sources, the ability use technology appropriately, and a focus on the client and family. Nursing must collaborate with other health professionals in the focus on high quality care.

Reflecting a national pattern, the registered nursing supply in Washington State is not currently adequate to meet the health care needs of the residents of the state. The shortage is more pronounced in very rural areas and in the Puget Sound Region with its many large health care centers. Factors contributing to the inadequacy of the nursing supply include the aging of the nursing workforce, adverse work-life environments for nursing, on-the-job injuries, workplace relationships, the image of nursing, and the lack of effective orientation of new graduates. Attrition through job change and predicted retirements affect the nursing supply in ways that have not yet been factored into future needs. The shortage will not be alleviated by the increase in new graduates that has already been achieved both through program expansion and through the addition of new associate degree programs. While foreign educated nurses contribute to meeting the nursing demand, their extensive orientation and education needs also require the use of resources.

Current State of Nursing Education

Nursing education in Washington State is based in the community and technical colleges, the two flagship public universities including their newer campuses, and six private universities. These educational institutions provide a high quality of education based upon national standards and attested to by the consistently high rate of passing the nursing licensure examinations. An effective articulation between the various levels of nursing education has been developed through the CNEWS work on articulation and competencies. Many programs have expanded and some new programs have opened. Many programs have instituted major efforts at student retention. Data demonstrate that the number of qualified applicants to nursing programs who are denied admission due to lack of space would be adequate to raise the number to nursing graduates to meet the need.

Challenges facing nursing programs are grounded in resource needs. Classroom space is at a premium; laboratory space and equipment are costly; clinical sites are full; and there is a shortage of nurses prepared at the graduate level for faculty roles. Any plan must address the

need for more nursing faculty. Both clinical agencies and faculty express commitment to the maintenance of “competency congruence” in order to assure that new graduates are prepared for the health care environment of the 21st century. The Washington Center for Nursing plays an active role in gathering data and supporting efforts directed toward in planning for the future.

Planning for the Future

Planning for the future needs to take into consideration the current situation, the nursing needs of the state, the various stakeholders in the process and the plans that have already been developed. The HEC Board Master Plan addresses needs for increased capacity in higher education and emphasizes the need for baccalaureate and graduate degrees in nursing. Additionally more associate degree nursing graduates will be needed to meet the needs of the state and to move forward into baccalaureate and graduate education. Fiscal support through targeted high demand funds would provide the resources for expansion of nursing education.

Recommended Next Steps

1. Develop new nursing education programs or expand existing programs only after a comprehensive plan for nursing education in the state is developed and the proposed programs/expansions are shown to be compatible with the master plan.
2. Gather and analyze data relative to the locations where shortage is present and the types of nurses needed in those settings including those with graduate preparation as well as those entering licensure.
3. Complete the Strategic Master Plan for Nursing Education including in the plan:
 - Goals for the overall number of student places for each level of student in each region throughout the state
 - Strategies for increasing the diversity of the nursing applicant pool and for the success of qualified nursing students.
 - Strategies for recruiting and retaining qualified faculty
 - Recommendations for regional mechanisms to effectively allocate scarce clinical resources
 - Recommendations focusing on curriculum including:
 - Consistent pre-requisite requirements across all community college nursing programs and across all RNB programs.
 - The number of clinical hours for specialty areas at differing levels of nursing education
 - Curricula for nursing at all community college nursing programs that would facilitate the students’ ability to transfer within the state when residence changes.
 - The use of technology such as simulations for nursing education programs
 - Support for innovative models of both didactic and clinical education in nursing.
 - Strategies to facilitate the movement of associate degree nurses into baccalaureate nursing education.
 - Recommendations regarding the resources, including capital needs, required to sustain an effective nursing education system for the state’s nursing needs.

- Development of partnership strategies to expand capacity especially in the critical area of preparing master's degree prepared nurses for teaching and provide funding for salary improvements for nursing faculty.
4. Promote funding mechanisms through the legislature, the HEC Board and other relevant agencies to support the implementation of the Master Plan for Nursing Education.
 5. Develop ongoing, effective collaboration between education and practice through CNEWS, NWONE and other nursing employers to facilitate competency congruence (the match between what is taught and the skills needed in practice), faculty development, the transition of new graduates to effective participation in health care, and retention of nurses in the workforce.
 6. Encourage a culture of innovation, forward-thinking, risk-taking, and collaboration in addressing the many challenges and issues facing health care and specifically nursing/nursing education in the future

Goal

The goal of this paper is to provide information on the current condition of nursing education in Washington State in relationship to the health care needs of the residents of the state and to identify directions for nursing education that would more effectively support excellence in health care as Washington State moves forward in the 21st Century.

Background

The State of Washington, like much of the United States, faces serious problems in relationship to providing effective health care for its residents. Problems facing health care are related to cost and access, to maintaining quality of care, and to providing for the health personnel appropriate to the needs.

Health Care Cost and Access

The cost of health care and the ability to access care when needed are major concerns whenever issues surrounding health are discussed. Nationally, according to the Centers for Medicare and Medicaid Services, health care spending as a percentage of gross domestic product has increased from 5.1 percent in 1990 to 14.9% in 2002 (Goldman & McGlynn, 2005, p. 15). More than half of this expenditure is on hospital and physician costs while nursing home, home health, and prescription drugs accounted for approximately 5% each (ibid p. 18).

The Washington State Blue Ribbon Commission on Health Care Access and Cost presented its Final Report in the fall of 2006. That report identified the following concerns in health care cost and access.

- There are roughly 593,000 Washingtonians without health care coverage, including 73,000 children.
- Young adults and employees of small businesses represent a sizeable portion of our uninsured.
- The annual increase in insurance premiums for small businesses in Washington is greater than the increase in wages or gross business income, some years by a factor of five.
- The state spends an estimated 4.5 billion on health care, up from 2.7 billion in 2000. This \$1.8 billion increase means that the share of the state budget going to health care has increased from 22 percent in 2000 to 28 percent today.
(<http://www.leg.wa.gov/Joint/Committees/HCCA/>)

The population of the state increased by 8.2% in the years from 2000 (5,894,121 total population) to 2006 (6,375,600 total population). Along with this increase in numbers was a change in the ethnic distribution of the population. The Asian/Pacific Islander group increased by 23.8% over the same time period. The Hispanic population increased by 28% while the Black population increased by 13%. Only the American Indian and Native Alaskan populations showed a lower increase than the population as a whole, increasing by only 7%. Thus the population increase has been accompanied by an increasingly ethnically diverse community (OFM, 2006.)

The U.S. population continues to age with the over 65 years as the fastest growing age group. By 2000, the elderly as a share of the population had risen to 12.4% and that number has continued to rise. The elderly use health care services differentially with average annual expenditures rising rapidly after age 65 (Goldman & McGlynn, 2005, p. 20). In Washington State in 2005 the population of elderly was 11.3% of the total population. The population of those over 65 grew by 2% in just the one year between 2004 and 2005. One third of this growth was attributable to those over 85 (Washington State 2005 Data Book.) Thus as the percentage of elderly in the population continues to rise, the need for health care services of all kinds will continue to rise.

Health Care Quality

Despite the expenditure of 15% of its gross domestic product on health care, the health of the population as measured by World Health Organization standards is less than that of most other developed countries (Goldman & McGlynn, 2005).

The Institute of Medicine has developed an approach to quality of care in which quality encompasses receiving the health care needed, not receiving unneeded health care, receiving care safely, and receiving care in a timely manner. Additionally, the IOM states that quality care is patient centered, efficient, and equitable. (Institute of Medicine, 2001).

The Rand Corporation, in cooperation with other organizations and government agencies, developed two tools for measuring health care quality. The first tool, the Quality Assessment Tool, is designed to measure the health of children and adults. The second, the ACOVE (Assessing Care of Vulnerable Adults), is designed to assess the elderly who are at high risk of functional decline. In reporting on areas of preventive, acute, and chronic care, these tools revealed that fewer than 60% of the quality measures were attained (McGlynn, Asch, Adams, et al. 2003). Quality of care for the elderly was the poorest with standards for preventive care met only 43% of the time although standards for treatment were met 80% of the time (Ibid.) Preventive care includes attention to preventing complications for those with chronic conditions as well as preventing illness from developing. Preventive care is a strength that professional nursing brings to health care.

With the increasing ethnic diversity in the population, concerns regarding quality as related to ethnicity arise. According to the National Healthcare Disparities Report (2004), inequality in care between majority and minority populations exist. There is differential access to care. Even when care is accessed opportunities for preventive care are missed and the quality of care provided is lower. The reasons for these disparities are not clearly identified but must be addressed to provide quality of care for all.

The Role of Nurses in Providing Quality Health Care

Nurses have been identified as a key resource in improving access, cost containment, and quality. For example, accessibility of nurses in telephone consultation has been a key strategy of many managed care plans. When individuals and families have the opportunity to consult with a qualified registered nurse, they are less likely to use emergency rooms and more likely to receive timely care for emergent concerns. Thus increased access can actually decrease cost. In many other ways nurses are effective in improving health care outcomes at manageable costs.

According to Mitchell & Shortell (1997) "There is support from some studies . . . that nursing surveillance, quality of working environment, and quality of interaction with

other professionals distinguish hospitals with lower mortality and complications from those with higher rates of these adverse effects." This underlies the successful Magnet Hospital program of the American Nurses Credentialing Center. One Washington hospital (University of Washington Medical Center) has received this designation.

Nursing-Sensitive Quality Indicators (NSQI) are "those indicators that capture care or its outcomes most affected by nursing care" (ANA, 1999.) These indicators include number of patient falls, nosocomial infection rate, incidence of complications, nurse satisfaction, and patient satisfaction with pain management, educational information, and overall care. Studies of identified NSQI have been conducted and they all respond positively to higher nursing staffing levels and environments in which nurses are supported in providing excellent care (ANA, 2004.) The shortage of nurses jeopardizes the achievement of these outcomes.

The American Organization of Nurse Executives has developed Guiding Principles for Future Patient Care Delivery (AONE, 2004). These Guiding Principles relate to the following major areas.

1. *The core of nursing is knowledge and caring.*
This reflects the importance of a well educated nursing workforce in order to bring knowledge to bear on health care situations. However, they also want to emphasize that this knowledge base cannot be separated from the personal attribute of caring for the clients. These are core values for nursing and will not change.
2. *Knowledge is access-based.*
In today's world health care knowledge is growing exponentially. No individual can memorize all that a nurse needs to know. The nurse must have skills in accessing the knowledge needed in specific situations and there must be a mechanism to allow access to greater knowledge.
3. *Knowledge is synthesized.*
While knowledge is important, it cannot be considered independently of the specific situation, other factors that impinge on the situation, and the contributions of others. In order to function, the nurse must be able to synthesize information across multiple levels of care, from multiple disciplines, and different settings.
4. *Relationships of care [with patients/clients/populations/multidisciplinary team]*
Nursing is interpersonal in its implementation. The nurse must have skills to develop effective relationships with others both clients and families and the multidisciplinary team. Without collaborative relationships care cannot move toward excellence.
5. *The "Virtual" and the "Presence" relationship of care.*
As technology increases there will be opportunities and requirements that nurses function in virtual relationships with clients that are mediated through technology. However, the physical presence of nurses will also be essential. Nurses must learn to adapt to these two realities.
6. *Care is user based.*
The history of health care is that it has often focused more on the needs of the provider than the needs of the client. The future emphasis must be on the needs of the clients and populations of care. Diversity must be respected. The location, the type of delivery, the responses of the health care professionals must all be adapted to the user of health care services.

7. *Managing the journey*

Nurses will, as will all health professionals, increasingly partner with clients as they journey toward health. Health is not simply a destination but a path along which individuals will move. Managing the journey must also be done in the context of user based care. (AONE, 2004)

As the various facets of these areas are explored, the message becomes clear that the nurse executives of today envision a future in need of a highly educated nursing workforce.

As the population has become more ethnically diverse, the make-up of the nurses serving that population has not changed at the same rate. Nurses from a variety of ethnic backgrounds contribute to the effectiveness of the health care delivery system both through their direct interactions with patients from their own background and through sensitizing the entire system to the differences that must be respected for health care to be effective. Efforts to increase the numbers of ethnic minorities and men in nursing will support development of a more responsive health care system.

The Nursing Supply in Washington State

In 2002 the Washington Nursing Leadership Council (WNLC) developed a strategic plan for nursing (Nursing Leadership Council, 2002). A major recommendation was the establishment of a Washington Center for Nursing that could oversee implementation of the strategic plan. The Washington Center for Nursing (WCN) came into being in 2004 with the hiring of an executive director. Since that time, the Washington Center for Nursing has supported the gathering and analysis of data regarding the nursing workforce as well as focusing and coordinating work with multiple groups examining the nursing supply and nursing needs in the state.

The WCN has supported the analysis and publication of data regarding licensed practical nurses, registered nurses, and advanced practice nurses that are available through licensure records. These data include address, age, and gender but do not include other demographics such as race/ethnicity or employment status. (WCN, 2006)

Licensed Practical Nurses (LPNs)

In 2000 there were approximately 12,400 LPNs in Washington State. In 2006 there were 14,629 LPNs with active Washington Licenses. Of this number, 13,313 had Washington addresses. LPNs are not evenly distributed across the state ranging from a high of 365 per 100,000 people in Workforce Development Area 6 (Pierce County) to a low of 128 in Workforce Development Area 7 (Southwest Washington) (WCN, 2006b). (See Appendix A for ratios in all Workforce Development Areas). This difference may relate to the difference in distribution of practical nursing education programs throughout the state and the employment opportunities available. Additionally, there has been an emphasis on increasing the RN numbers in the state and some of this emphasis has focused on increasing the numbers of LPNs advancing their education to become RNs. The mean age of LPNs in Washington State is 46.8 which is an increase from 45.3 which it was in 1999. In 2006 in Washington 11.6% of LPNs were men. This is an increase from 8.5% in 1999. The percentage of male LPNs has been considerably higher in Washington than in the country as a whole. The U.S. data for 2004 identify that 5% of LPNs were men.

Registered Nurses (RNs)

While the registered nursing supply has increased steadily since 2000, it showed a steep increase between 2004 and 2006 as increased admissions to nursing programs began

resulting in increased graduations and increased numbers achieving initial licensure. Sustaining and even increasing the numbers of new licensees will be necessary. (This will be discussed more fully in the section on Nursing Programs.)

In 2000 there were approximately 51,000 registered nurses. In 2006 there were 58,356 registered nurses with active licenses residing in the state. (There are a total of 71,048 active licenses, but for purposes of this paper, the assumption is made that those residing in this state are the ones working in this state. Although some active in Washington may reside across state borders that number may balance with those residing in this state but working across a state border.) This is an increase of 4007 individuals and provides an improved ratio of 925 nurses to 100,000 residents. (Center for Health (Workforce Studies, 2006c). One question has been raised about the area immediately south of the Canadian border in western Washington. Because of higher salaries in the U.S. than in Canada, Canadian nurses do immigrate into the United States. Less clear is whether any maintain residence in Canada and cross the border for employment.

Basic Educational Preparation: Data from the Washington Nursing Care Quality Assurance Commission on newly licensed graduates (NCQAC, 2005) indicates that for the 2005 graduation year there were a total of 1785 graduates. Of these 1179 (66%) graduated with an associate degree and 606 (34%) graduated with a BSN or a master's entry degree. With increasing evidence of the need for more highly educated nurses, addressing this disparity while maintaining overall numbers of nurses is a significant challenge. The number of those with an associate degree who go on to earn a bachelor's or master's degree is not clear and may make an important contribution to increasing the overall educational preparation of nurses in the workforce.

State-wide Distribution: The supply also varies throughout the state from a high of 1,228 per 100,000 in Workforce Development Area 12 that includes Spokane County to a low of 727 per 100,000 in Workforce Development area 9 that includes Yakima and south central Washington (WCN, 2006). Thus the nursing supply and any nursing shortage are not the same throughout the state. (See Appendix A for ratios in all Workforce Development Areas.) While numbers of RNs in specific areas are significant, the preponderance of large regional hospitals employing large numbers of nurses in areas such as the Puget Sound may make simple numbers of RNs compared to population an inexact measure of area need.

Age: The mean age of RNs in 2006 was 48.4. While this is the same as in 2004 it is an increase from 46.4 in 1999. In Washington 8.1% of nurses are men. This is an increase from 6.3% in 1999. Data from the entire U.S. is available for 2004 that showed 5.7% men in the registered nursing pool. Washington State appears to be making progress in increasing the number of men in nursing but they are still a minority.

Racial-Ethnic Diversity: Although state figures are not available, national figures provide some indication of racial/ethnic diversity in the nursing workforce. According to the Preliminary Findings of the 2006 Sample Survey of Registered Nurses (2005) "of the nurses who indicated their racial/ethnic background in 2004, 88.4 percent (an estimated 2,380,639) were White, non-Hispanic; 4.6 percent or 122,495 were Black/African American, non-Hispanic; 3.3 percent or 89,976 were Asian or Pacific Islander, non-Hispanic; 1.8 percent or 48,009 were Hispanic; 0.4 percent or 9,453 were American Indian/Alaskan Native; and 1.5 percent were from two or more racial backgrounds."

According to the Workforce Education and Training Board for Washington State there is a lack of diversity in the health care workforce. This exacerbates health disparities

among ethnically diverse populations. Ethnically diverse populations are also the fastest growing labor pool in the state. (Workforce Education and Training Board, 2007a) In 2004 the Sullivan Commission (Institute of Medicine, 2004) urged the federal government and accrediting agencies to take aggressive action to increase the number of under-represented minorities in the health care professions. A key recommendation was that institutions should evaluate their own settings as a climate for diversity. Both financial and nonfinancial obstacles that form a barrier to participation of minorities must be addressed in order to encourage greater involvement of underrepresented minorities in health care delivery.

Advanced Registered Nurse Practitioners (ARNPs)

In Washington State the ARNP license includes those who practice as nurse practitioners, nurse anesthetists, and nurse midwives. In Washington only those Clinical Nurses Specialists (CNS) in the area of mental health practice are designated ARNPs. This is in contrast to some other states where all of those with a CNS credential are eligible for advanced practice status. All ARNPs must also hold active RN licenses. An ARNP is required to hold a master's degrees (unless grandfathered from an earlier license), have completed an appropriate educational program in the advanced practice specialty, pass nationally standardized examinations in their particular specialty, and limit practice as an ARNP to the designated specialty. ARNPs are sometimes referred to as part of the group "midlevel" practitioners who provide an extension of medical services although many ARNPs would state that their practices are uniquely informed by their role as nurses. Washington State has a higher proportion of ARNPs relative to the population than many other states. This may be due to Washington being an early adopter of the nurse practitioner role; providing support for expanded practice as early as the 1970s. Just as with other licensed nursing professionals, ARNPs are not evenly distributed across the state. For example WDA 12 (Spokane) has more than twice as many ARNPs compared to population as are found in WDA 7 (Southwest Washington). The mean age of ARNPs, 49.5 years, is greater than the mean age of registered nurses as a group. (Data from Center for Health Workforce Studies, 2006a) In 2006 12.% of ARNPs licensed in Washington were men. This percentage has held almost the same since 1999 when it was 12.7%.

Nurses Prepared for Faculty Roles (MSN/MN to PhD)

A master's degree in nursing is the required minimum credential for teaching nursing at the associate degree and baccalaureate level. It is at the graduate level that individuals specialize in areas of clinical expertise and gain background for advanced leadership, education, and research. A doctoral degree is required for tenure track positions in the university nursing programs. While the universities prefer to hire faculty with a doctorate, many clinical faculty in those institutions hold the master's degree. In order for individuals to be prepared to move into doctoral study, the master's degree is a requirement. Therefore, the number of nurses prepared at the master's degree level is critical to addressing the supply of nursing faculty at all levels. The majority of ARNP nurses currently prepared at the master's degree level are focused on direct clinical practice although some do move into nursing education roles.

A shortage of nursing faculty exists on the national level. A 2006 survey by the American Association of Colleges of Nursing (AACN, 2006) revealed a 7.9% faculty vacancy rate in baccalaureate and higher degree programs. 53.7% of those positions required a doctoral degree.

There are no reliable data that would reveal the number of nurses in Washington who hold graduate degrees other than the numbers who are licensed as ARNPs. The graduate programs of the two flag ship universities of the state attract and graduate many individuals from other parts of the country as well as people from within the state. While a large percentage of these may stay in Washington, the exact number is not clear. More of the individuals attending the private colleges and universities and the newer campuses of the state universities may intend to remain within the state, but again this conjecture rather than data. Gathering data regarding this important resource would facilitate planning. For this paper, universities were asked to provide data on the master's prepared graduates for 2001, 2005, and a predicted number for 2010. Unfortunately, these data reveal that there is no significant increase. The number of PhD graduates who are prepared for tenure track positions in universities has not shown significant growth. However, this may change with the institution of a new PhD in nursing program in eastern Washington. See Table 4.

Nationally qualified applicants are being turned away from both master's and doctoral programs because of a shortage of faculty (AACN, 2005). This creates a circular problem in which not enough faculty are prepared and more faculty cannot be prepared without more faculty. On the state level, most of the universities could accommodate an increase in master's students although the data regarding precisely how many more could be accommodated if there was significant additional funding is not clear.

Factors Affecting the Nursing Supply

The nursing supply is influenced both by those entering the employment at the beginning of their careers and those leaving the field both through resignation and through retirement.

Aging of the Workforce

Across the nation and within Washington, the mean age of nurses has been gradually increasing (WCN, 2006.) The age of the nursing workforce has implications for loss through retirement and the effect of factors affecting resignation. In the 2004 National Sample Survey of RNs, of the 14% of RNs not working 33.8% left for retirement although they maintain RN licensure (NSSRN, 2005). As nurses age, decisions about retirement are affected by issues such as the ability to continue with the physically demanding requirements of direct care. The advent of 12 hour shifts, while meeting some goals of both individual nurses and employers, may adversely affect the ability of individuals to continue working as they age and confront more physical limitations. Additionally, as nurses age they may not be able to meet the physical demands even before they reach the general retirement age of 65. These nurses may resign and seek other employment because of an inability to meet the demands of the job. Employers will need to respond to these issues affecting nursing supply through strategies that lessen the physical demands of nursing positions and through a flexible approach to nursing shift length. The average age at graduation from a basic nursing program showed continuous rise until 2000. From then until the 2004 national survey it showed a slight drop (NSSRN, 2005). A continuation of this trend could ease the problem of the aging workforce.

The nursing faculty workforce is older than the general nursing workforce. The 2006 AACN survey (AACN, 2006) revealed that the average age of nursing faculty in baccalaureate and higher degree programs is 51.5. However, the average age of PhD

prepared faculty at the rank of professor was 56.8 years. The average PhD at the associate professor rank was 54.6. Thus the ability to prepare more nursing faculty is in jeopardy.

Adverse Work-life Environment

As a national nursing shortage affects the ability of employers to fill nursing positions, deficits in staffing increasingly are implicated as creating an adverse work-life environment (ANA, 2001.) Fatigue of nurses, created by long shifts, many shifts in a row, and a lack of days off may be a significant factor in patient safety and in nurse satisfaction (Rogers, Wang, Scott, et al. 2004). With fewer nurses the nurses present must work harder, faster, and longer to meet the needs of the patients. Without adequate staffing, safety of patients is compromised. Individuals may leave nursing for other occupations because of the work demands of clinical nursing roles and also because of the psychological effect of feeling that they are not providing care at the standard they believe is needed. Chronic stress is particularly found in areas such as critical care and those areas with high patient mortality. This too, contributes to burnout.

The Institute of Medicine produced a report on “Keeping Patients Safe: Transforming the Work Environment of Nurses” (I.O. M., 2003.) As part of a broad approach to safety the report provided recommendations related to management practices, work design, and what an organizational culture of safety should be like. The report suggested that actions by both state and federal governments are needed to accomplish the desired goals of a safe work environment for nurses. Other parties who affect the work environment including employers and nursing organizations also need to take an active role in shaping a work environment that supports excellence in nursing.

On-the-Job Injuries and Violence

Data regarding on-the-job injuries for those in direct care positions demonstrate that nursing is a hazardous occupation. The Bureau of Labor Statistics (2002) reports injury rates of 8.8 per 100 in hospital settings and 13.5 per 100 in nursing home settings. Fragala and Bailey (2003) aggregated over 80 studies and identified that the lifetime prevalence of back injuries was between 35% and 80%. Addressing this issue is crucial to the maintenance of an adequate nursing supply. Nurses may also be the victims of violence in the workplace. “Working in a healthcare facility is considered the third most dangerous job in the United States.” (Gilmore-Hall, 2001.) This is especially true of those in psychiatric and emergency settings. Many instances of violence toward nurses go unreported. In some settings there is inadequate support for those who have been victims of violence. Failure to address issues of violence against nurses drives capable nurses out of the work force.

Workplace Relationships

Other issues that nurses cite as contributing to stress in the workplace include the respect or lack of respect from others in the environment and the wage compression that does not value the knowledge and expertise of experienced nurses. Research carried out at fourteen hospitals which had achieved "Magnet" designation from the American Nurses Credentialing Center (ANCC) also indicated that healthy collaborative relationships between nurses and physicians were not only possible, but were directly linked to optimal patient outcomes (Kramer & Schmalenberg, 2003). Results of this ANCC study found that quality of physician-nurse relationships, (as shown by collegiality and collaboration) increased the quality of patient care outcomes. While actual salaries have shown a significant rise from 1980-2004, the “real” salary in terms of inflation adjusted dollars has shown a relatively small increase in spite of the nursing shortage (, 2005.)

Nurses who face these realities in their place of employment are more likely to experience burnout and to resign, moving out of nursing. According to the National Sample Survey of RNs (2005) of the 14% of RNs who are no longer working as nurses, 42.7% left for reasons connected with the workplace (NSSRN, 2005.) Those leaving due to workplace conditions are experienced nurses, vital to excellence in patient care and essential for mentoring new nurses in the workplace.

Image of Nursing

Unfortunately, in spite of many efforts by nursing, the image of nursing in the public eye often does not match the reality. There are those who continue to view nursing as being subservient to medicine and do not realize the independence and autonomy found in modern nursing. There are still those who express surprise that in the face of a nursing shortage, the standards are not simply lowered to take in more individuals regardless of educational accomplishments. While the national television campaign of Johnson and Johnson is directed toward changing the public perception of nursing, this continues to be a challenge.

Effective Orientation of New Graduate

The quality of orientation or transition programs for new graduates affects early attrition of new graduates who leave the nursing workforce because they cannot cope with the expectations. In a profession requiring life and death decision making, the expectation that a new graduate can be independent immediately after graduation is unrealistic. With the high acuity in the hospital, the complexity of health care regimens, and the potential for harm as well as good in the available therapies, the new graduate should not be expected to perform at the level of the experienced RN. New graduates may be asked to take on responsibility before they are ready. The shortage of nurses changes the workplace so that there are fewer experienced individuals to serve as mentors or preceptors. In a major study regarding preceptors, new graduates who have effective preceptors are more satisfied with social and psychological rewards initially and have an enhanced feeling of self-regulation (Bellinger & McCloskey, 1992). Promoting effective orientation can enhance the nursing supply through preventing attrition.

Foreign Educated Nurses

Throughout the United States the recruitment and immigration of foreign educated nurses has been one avenue used by those trying to address the nursing shortage. A discussion of all the issues surrounding their recruitment, their orientation and education needs, and their employment are beyond the scope of this paper. However, it is appropriate to note that once in the United States, foreign educated nurses need carefully structured programs to help them adjust to the differences in practice patterns and expectations of registered nurses in the United States from those they were accustomed to in their countries of origin. Without effective transition programs for those foreign educated nurses recruited, this strategy for increasing the nursing supply will be ineffectual. Whether this is the current practice in Washington State is not documented. Because of the many costs and barriers, recruiting foreign educated nurses is unlikely to make a significant impact on the nursing shortage in Washington State.

Nursing Needs in Washington State

The shortage of nursing personnel to meet health care needs emerges as a primary concern. In the years from 2004-2014 the data show that there will be a need for 2,006 new

registered nurses annually (Workforce Training and Education Coordinating Board, 2006). Their data additionally estimates that Washington State needs approximately 690 more RN graduates annually to meet this need. While programs have significantly increased graduates in the past five years, further increasing the graduation numbers will a variety of strategies.

In addition to simply more nurses, a greater percentage of those nurses with baccalaureate degrees are needed. Data are increasingly showing that more highly educated nurses are associated with better patient outcomes (Aiken, Clarke, Cheung et al, 2003.) However, to achieve the numbers of nurses needed to meet the needs of the citizens of the state, associate degree prepared registered nurses are also essential. Increasing the number of associate degree nurses who progress to achieve their bachelor's degree is an important aspect of the addressing the nursing supply of highly qualified individuals. Other than the needs for nursing faculty, there are few data that indicate the needs for nurses with graduate preparation, but this area of need will continue to grow as nurses with specialized preparation take on leadership roles in many settings.

There is no deficit in the production of licensed practical nurses. The average annual openings for licensed practical nurses are estimated to be 407. Because 2006 saw the licensure of over 750 new LPNs it appears that additional practical nursing graduates are not needed. (See data below on numbers of new LPNs.) It would appear that LPNs are being over-produced. One factor that may make these data for LPN availability unreliable is that many newly licensed LPNs are already enrolled in "step" programs and plan to complete their education and become registered nurses. Thus, their availability to the LPN market may be short.

Hospital Needs for Nurses

According to the 2005 Workforce Survey of Washington State hospitals (Skillman, Andrilla, Phippen, et al., 2005) shortages of nurses are present in hospitals but lessening as identified by key measures.

- **Difficulty in recruitment of RNs:** Approximately 38% reported it was very difficult and another 45% reported that it was somewhat difficult to recruit nurses. Difficulty in hiring is less apparent in some hospitals such as Children's than in others.
- **Numbers of nurses employed vs. vacancies:** While the numbers of registered nurses employed had increased 34% from 2002-2003 to 2005, over 1200 FTE positions for registered nurses remained vacant. Improvement was shown in that the 2005 vacancy rate was 5.8% down from 10.1% in 2001.
- **Emergency Admission Diversions:** Another measure of nursing shortage is the necessity for a hospital to divert emergency department admissions to a nearby hospital due to a shortage of nursing personnel. In 2001, 55% of hospitals had reported the need to divert. This lessened to 38% in 2004 and 37% in 2005. In terms of number of days on which diversion was necessary, in 2005 only 41% diverted more than 10 days as compared to 53% diverting for more than 10 days in 2004.
- **Hiring of Contract (Temporary) Employees:** Another indicator of nursing shortage is the need for hiring contract (temporary) nurses in hospitals. There is a wide difference across the state in this measure. Spokane County reported no use of contract employees while the Puget Sound Area of Pierce, King, and Snohomish Counties reported that 100% of the hospitals used contract employees. Overall 45% of hospitals indicated that their use of contract employees was less in 2005 than it was in 2004.

Overall, these data would indicate that the shortage of nurses in hospitals continues but is not evenly distributed across the state and has lessened since 2001. Data regarding difficulty of recruitment for hospitals do not indicate areas in which difficulties were encountered or the qualifications needed for the vacant positions. Some anecdotal evidence from conversations with nurse recruiters would suggest that areas requiring special abilities such as critical care are more difficult to fill. Retirements that will take place with the aging of the nursing workforce were not taken into consideration in the analysis that led to these conclusions. This is a serious concern that merits attention.

Hospitals remain the primary employer for new graduate registered nurses. According to the most recent practice analysis by the National Council of State Boards of Nursing (2005), 85.6% % of new registered nurse graduates are employed in hospitals in the year following their licensure when this survey is conducted. (This survey is conducted every three years and the percentages have been stable across time.) According to its most recent national practice analysis of newly licensed LPNs (NCSBN, 2003) 42.4% of the new LPNs worked in hospitals.

Long Term Care Needs for Nurses

Long term care is provided in skilled nursing facilities, residential care facilities, assisted living arrangements, community-based programs and personal homes. Quantitative data regarding the nursing needs in long term care in Washington State have not been accumulated. Anecdotally, nursing home directors of nursing express concerns about filling positions for licensed nurses. Many advertisements for nursing positions in long term care appear in every newspaper that has help wanted advertising. Often these advertisements specify that either an RN or an LPN would fill the position.

In 2005 the National Commission on the Nursing Workforce for Long Term Care released its final report in regard to the national picture for nursing staff in long term care. In these settings 54% of the employees are nursing staff, including both licensed staff and assistive personnel. In 2002 15 percent of nursing home registered nurse (RN) positions, 13 percent of licensed practical nurse (LPN) positions, and 8.5 percent of certified nurse aide (CNA) positions were vacant (National Commission, 2005 p. 5.) This shortage is exacerbated by the wage discrepancy in which individuals in long term care have lower wages than those working in hospitals (National Commission, 2005.)

The National Council of State Boards of Nursing (NCSBN) in its most recent practice analysis of newly licensed LPN/VNs (2003) identified that 44.5% worked in long term care settings. 50.6% of new graduates reported working with stable, chronically ill clients. The majority of new LPNs cared for adults with most indicating care for the elderly. According to the most recent practice analysis by the NCSBN (2006) 7.6 % of new graduate registered nurses are employed in long term care. This is 2% lower than in 2002. Long term care facilities continue to report serious difficulties in hiring registered nurses. Their salaries tend to be lower than in the hospital and working conditions may be more stressful.

In Washington State there appear to be fewer LPNs hired into hospital settings than nationally. Nursing educators have noted that their licensed practical nursing graduates are primarily working in long term care environments. Some have expressed concern that their LPN graduates are being asked to perform beyond what they were prepared to do and in ways that may be beyond their legal scope of practice. This is often related to the difficulty that long term care facilities have in recruiting registered nurses.

Nursing Faculty

Nursing programs in Washington report serious difficulty in hiring qualified faculty. Despite nationwide advertising, nursing programs may receive only two or three applicants for full time positions and often have no qualified applicants for part time positions. Most programs have received no applications from ethnic or racial minority individuals. Recruiting into the Puget Sound region is further hampered by the high cost of housing relative to wages in the area. The University of Washington indicates they would be able to hire well qualified faculty if the salaries were able to be competitive with California. The NCQAC has granted many waivers allowing associate degree programs to hire baccalaureate prepared nurses rather than master's prepared nurses because they were unable to fill faculty positions. The nursing faculty has a higher average age than the clinical nursing population with increasing numbers of retirements facing nursing programs.

There is a nationwide shortage of nursing faculty as documented by the AACN in their 2005 White Paper (AACN, 2005) Nationally "75% of U. S. nursing schools cited faculty shortages as the major reason for denying admission" (LaRocco, 2006). The national picture for associate degree programs is similar to Washington with the NLNAC reporting that almost one-third of associate degree programs nationally report hiring a baccalaureate prepared nurse (NLNAC, 2006.) Nationally many of these colleges have programs in place to provide financial and time support for these individuals to attain their master's degrees. They are "growing their own" in the face of the shortage. The Health Professions Loan Repayment and Scholarship Program of the HEC Board financed by the Washington legislature provides targeted support for individuals preparing for nursing faculty roles. There are a limited numbers of "slots" available in this financial support program.

One important concern that affects recruitment of faculty involves the failure to clearly identify and recognize the actual workload required. Faculty must prepare and evaluate curricula. Contracts require that they must be available to students outside of the formal classroom environment for discussion, mentoring, and advising. In service to their respective educational institutions, faculty work load includes additional meetings and project work that may not be reflected in the specific class load that the public equates with teaching. Additionally nursing faculty help to arrange for clinical placements, travel to clinical sites, and spend a great deal of time working with facility staff to assure that students have an appropriate learning environment. National accreditation provides support for excellence but creates additional demands for comprehensive evaluation plans and constant attention to curricular updating. Nursing faculty work may be understated by those not familiar with its demands.

Low faculty salaries both in universities and in community colleges further impact the ability to recruit new faculty members. According to LaRocco, (2006) only three-fourths of nursing doctoral graduates state they are seeking faculty positions. Because of stagnation in academic salaries, many qualified nurses seek employment in clinical settings where salaries are significantly higher. According to the CNEWS 2005 survey, the average practical nursing instructor makes \$4,000 a month for a 12 month contract (note that the majority of these are BSN prepared). The average associate degree faculty member makes \$5,000 per month for a 9 or 10 month contract. These individuals must have a master's degree and experience. At the baccalaureate level where faculty rank is a factor the average instructor was paid \$5,251 per month, the assistant professor averages \$6,135 per month, the associate professor averages \$7,250 per month, and the professor averages \$9,449. These latter positions require

a doctorate and promotion to the higher levels requires significant research and publication. Faculty members frequently are asked to teach evenings and weekends. While in the clinical setting this would result in premium pay, there is no recognition of this in the educational setting. While these data reflect 2005, there has been no movement to significantly increase faculty salaries at any level in state supported schools of nursing and private universities are also facing budget limitations, therefore, the disparity in salaries between education and service institutions is expected to continue.

The hourly rate for a part time clinical instructor was not included in the CNEWS survey. However, one college reported that part time clinical faculty members were paid \$38 per student contact hour. This may appear to compete with the hourly rate for a clinical nursing position, but the clinical position is completed during the assigned paid hours. The clinical faculty member has many additional hours of planning learning experiences, interfacing with the clinical staff, grading clinical paperwork of students, counseling with and evaluating students and meeting with other program faculty. While exact data are not available, anecdotal conversations with part time faculty indicate that they spend at least one hour of additional work for each hour of student contact. In fact, this additional work load is often why part time faculty members leave teaching and return to clinical practice.

As a comparison of hourly rates for nursing positions one facility contract in the Puget Sound area shows 2005 wage rates of \$31.95 per hour for the person with 10 years experience (at 180 hours per month average that would be \$4867 per month) to \$40.06 (at 180 hours per month that would be \$6732), and the person with 30 years experience makes \$40.06 per hour (\$7210 per month.) In addition there is an additional year of credit on the pay scale for the BSN and 2 years of credit for the master's degree. Certification in a specialty results in \$1.35 per hour additional. There is a shift differential of \$2.50 per hour for evenings, \$4.00 per hour for weekends, and a 15% premium for those full or part time who opt out of benefits. This contract included increases for 2006. A new contract is scheduled to be negotiated in 2007. The legislature has not been raising faculty salaries to even meet inflation. These salaries are weighed by nurses as they decide to accept a faculty position. In some states nursing faculty salaries have been increased. For example, a recent contact with an Illinois community college revealed a contract with a top faculty salary of \$72,000 (for a 9 month contract) in an area where the average home price was \$150,000. In the Puget Sound region where finding a home for less than \$300,000 is a challenge, the top community college faculty salary based in their contracts is rarely much over \$60,000 (for a 9 or 10 month contract).

Attempting to increase the size of nursing programs by hiring part time faculty creates a different recruitment problem. In most instances, part time faculty are hired for one term at a time at wages considerably below those of full time faculty. Unless the person teaches at least 50%, they are not usually eligible for health care benefits or retirement plans. Some individuals seek part time positions hoping to become full time. However, adding full time faculty line items is often very difficult with the overall budget constraints of community and technical colleges. Most of the state and private universities have similar constraints in regard to adding of full time faculty positions.

In at least one state, legislators thought to ease the nursing faculty shortage by reducing the educational requirements for faculty. Both the nursing and educational communities opposed this approach because of its potential to decrease the quality of the education

provided. Relieving shortages by decreasing needed qualifications may ultimately decrease the quality of care available to the citizens of the community.

Meeting the Nursing Workforce Shortage

Washington State is not currently graduating enough new nurses to meet the demand for registered nurses. The Workforce Training and Education Coordinating Board (2007b p.19) provides the estimate that Washington State needs approximately 690 more registered nurse graduates annually to address the workforce issues. While programs have significantly increased graduates in the past five years, further increasing the graduation numbers will need a variety of strategies. There is no deficit in the production of licensed practical nurses. The looming retirements of an aging nursing workforce have not been effectively integrated into any of the projection models. Therefore, the nursing needs may be greater than the current estimates.

The Workforce Education and Training Coordinating Board (2007) recommended the following to effectively address the problem of the nursing workforce shortage:

- Increase number of people entering health care professions
- Increase capacity of health care education/training programs
- Modify state regulations/statutes to alleviate barriers
- Consider rural health care workforce issues
- Increase the racial and ethnic diversity of health care workers

Current State of Nursing Education

There are 40 nursing programs in Washington State some with multiple types of programs and tracks for student progression within those programs. Appendix B provides a list of the approved Nursing Programs in Washington State. All are in institutions of higher education. Appendices C and D provide maps showing the geographic distribution of nursing programs of all types.

Setting Standards for Nursing Education

The nursing programs in Washington have used a variety of state and national references and standards to assure that they are preparing students effectively for nursing roles. Using these standards keeps nursing programs in touch with national expectations for excellence and gives students and the public assurance that programs are effective. These standards are outlined in the table below.

Table 1 Standards Used for Nursing Education Planning

Standard	Organization	Content	Target Group
WAC 246-840 RCW 18.79 Nursing Education in Washington State	Nursing Care Quality Assurance Commission (NCQAC)	<u>246-840-550</u> Standard I. Purpose and outcomes for approved nursing education programs. <u>246-840-555</u> Standard II. Organization and administration for approved nursing education programs. <u>246-840-560</u> Standard III. Resources, facilities, and services for approved nursing education programs. <u>246-840-565</u> Standard IV. Students in	All pre-licensure programs

Standard	Organization	Content	Target Group
		approved nursing education programs. <u>246-840-570</u> Standard V. Faculty in approved nursing education programs. <u>246-840-575</u> Curriculum for approved nursing education programs. <u>246-840-700</u> Standards of nursing conduct or practice.	
The Essentials of Baccalaureate Education for Professional Nursing Practice, 1998 (Update in planning)	American Association of Colleges of Nursing (AACN)	Provides recommendations regarding: <ul style="list-style-type: none"> • Liberal Education • Professional Values • Core Competencies • Core Knowledge • Role Development • Teaching Methodologies/Strategies 	Baccalaureate programs
Educational Competencies of Graduates of Associate Degree Programs, 2000	National League for Nursing & the National Organization for Associate Degree Nursing (NOADN)	Provides recommended competencies in relationship to: <ul style="list-style-type: none"> • Professional behaviors • Communication • Assessment • Clinical Decision Making • Caring Interventions • Teaching/Learning • Collaboration • Managing Care 	Associate degree programs
Nursing Education Articulation Plan and Competency Statements, 2002	Council of Nurse Educators in Washington State (CNEWS)	Presents minimum competencies upon graduation for each level in the areas of: <ul style="list-style-type: none"> • Caregiver • Decision maker • User of information technology/communicator • Teacher • Manager of care/collaborator • Professional Values/Behaviors • Professional Role Development • Research • Leadership 	Practical nursing Associate degree nursing Baccalaureate Nursing
Standards for Accreditation of Baccalaureate and Graduate Nursing Programs, 2005	Commission on Collegiate Nursing Education (CCNE)	I. Program Quality: Mission & Governance II. Program Quality: Institutional Commitment & Resources III. Program Quality: Curriculum: Teaching/Learning Practices IV Program Effectiveness: Student Performance & Faculty Effectiveness	Baccalaureate and higher degree programs
Domains and Core Competencies of Nurse Practitioner Practice	National Organization of Nurse Practitioner Faculties (NONPF)	<ul style="list-style-type: none"> • Management of Patient Health/Illness Status • The Nurse Practitioner-Patient Relationship • The Teaching-Coaching 	Nurse Practitioner Programs

Standard	Organization	Content	Target Group
		Function <ul style="list-style-type: none"> • Professional Role • Managing and Negotiating Health Care Delivery Systems • Monitoring and Ensuring the Quality of Health Care Practice • Culturally-Sensitive Care 	
Curriculum Guidelines for Nurse Practitioner Education	Nurse Practitioner Specialty Organizations	<ul style="list-style-type: none"> • Professional Role • Professional Practice 	Nurse Practitioner Programs
Essentials of Master's Preparation for Advanced Practice Nursing	American Association of Colleges of Nursing	Graduate Core Curriculum Content <ol style="list-style-type: none"> I. Research II. Policy, Organization, and Financing of Health Care <ol style="list-style-type: none"> A. Health Care Policy B. Organization of the Health Care Delivery System C. Health Care Financing III. Ethics IV. Professional Role Development V. Theoretical Foundations of Nursing Practice VI. Human Diversity and Social Issues VII. Health Promotion and Disease Prevention Advanced Practice Nursing Core Curriculum <ol style="list-style-type: none"> I. Advanced Health/Physical Assessment II. Advanced Physiology and Pathophysiology III. Advanced Pharmacology 	Programs offering the master's degree in nursing
Essentials of Doctoral Education for Advanced Practice Nursing	American Association of Colleges of Nursing	Scientific Underpinnings for Practice <ol style="list-style-type: none"> II. Organizational and Systems Leadership for Quality Improvement and Systems Thinking III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care V. Health Care Policy for Advocacy in Health Care VI. Interprofessional Collaboration 	Programs offering the Doctor of Nursing Practice

Standard	Organization	Content	Target Group
		for Improving Patient and Population Health Outcomes VII. Clinical Prevention and Population Health for Improving the Nation's Health VIII. Advanced Nursing Practice	
Accreditation Manual with Interpretive Guidelines by Program Type, 2006	National League for Nursing Accrediting Commission (NLNAC)	I. Mission and Governance II. Faculty III Students IV Curriculum & Instruction V Resources VI Integrity VII Educational Effectiveness	All levels of nursing programs

Many programs in the state have chosen to use nationally standardized testing and remediation services to assist students in success and to support their program evaluation efforts. These programs do add a significant cost for students. Table 2 below identifies the tests and numbers of programs using these.

Table 2 Nationally Standardized Tests in Use by Nursing Programs

Testing Company	Number of Programs
Assessment Technologies Inc. (ATI)	21
National League for Nursing (NLN)	3
Educational Resources Inc. (ERI)	3
Health Education Systems Inc. (HESI)	2
National Council of State Boards of Nursing Review Examinations	5

Community and Technical College Programs

The community and technical colleges of Washington State are all part of a coordinated system under the direction of the State Board of Community and Technical Colleges (SBCTC). All new programs must be approved first at the local college level and then by the SBCTC before specific planning is undertaken. Nursing programs must then be approved by the Washington State Nursing Care Quality Assurance Commission (NCQAC) in order for graduates to be eligible to take the licensing examination.

The credits and clinical experiences vary considerably among the various programs of each type. The Washington Center for Nursing organized the data from the various programs to provide specific information on both clinical hours and types of experiences. These data are contributing to the analysis of clinical placements and may lead to more effective distribution of scarce clinical resources for nursing education.

Practical Nursing

Twenty-two of the community and technical colleges provide preparation for licensed practical nursing. Seven programs are located in Eastern Washington while 15 are located in Western Washington. The Puget Sound region has a concentration of programs with 11 located in the area from Olympia north through Everett. A fourth practical nursing only program is located in a private college. Three of these LPN programs (one in Eastern Washington and two others in Western Washington) prepare only practical nurses. Eighteen community college practical nursing programs are currently "ladder" or "step" programs. In these programs, all students are prepared for practical nursing licensure in the first year of the

program and are then provided an opportunity for progression to a second year to complete the associate degree preparation for registered nurses. (Data from WSNQAC, 2007.) The remaining approved community college licensed practical nursing program is currently applying to add the associate degree and become a step program. (Swan, 2006.)

Associate Degree Nursing

There are 27 associate degree programs located in community and technical colleges that prepare registered nurses. Five of these programs are new within the last five years. As noted above, one additional college is seeking approval for an associate degree program. This represents an approximately 23% increase in numbers of associate degree programs. In addition to the new programs, existing programs have increased their enrollments significantly. (Data from WSNQAC, 2007.)

Community College nursing programs prepare entry level graduates to provide direct patient care, and to use this foundation for further professional development and formal education. These programs vary in credits and clinical hours, however, all require more than the minimum 90 credits for the associate degree. All provide some type of option for licensed practical nurses to become registered nurses through completing the associate degree program. Eighteen programs are “step” programs in which their own students are admitted to the first year practical nursing component, complete that year and meet program criteria, and then progress on to complete the associate degree. They may admit other LPNs to the second year on a space available basis.

Universities

Universities provide baccalaureate and higher degree programs in nursing. There are two major state universities with nursing programs both on their main campuses and on newer campuses. These account for seven locations where nursing education occurs at state universities. This state also has six private universities that provide nursing education.

Baccalaureate Degree Programs

Generic baccalaureate in nursing programs provide preparation for registered nurse licensure plus they require a more extensive body of general education than an associate degree and additional nursing courses primarily in the areas of community health, leadership, and the use of research in practice than an associate degree. This broader background provides for an expansive approach to nursing and the preparation for graduate education. While many entry level registered nurse positions do not differentiate between new graduates with associate degrees and those with baccalaureate degrees, many employers expect that those with baccalaureate degrees will be better prepared to move into leadership roles and independent decision making.

The two main campuses of the state universities and one branch campus provide generic baccalaureate in nursing programs to prepare individuals for registered nurse licensure. All of the private universities provide this pre-licensure baccalaureate education. One of these formerly provided baccalaureate education for associate degree RNs only but has now expanded to provide generic baccalaureate entry education as well. Most of the others have increased their class sizes to increase the number of basic students prepared at the baccalaureate level. The available data are limited but it appears that in spite of some increases in generic baccalaureate program size, Washington has a lower ratio of generic RN academic spaces than many other states.

All of the universities and their branch campuses except one campus program provide for baccalaureate education for the registered nurse with an associate degree. These are referred to as RNB programs. The RNB programs have provided an opportunity for advancing education for many nurses. This has resulted in the large number of practicing nurses that hold the baccalaureate degree. There are no current data on how soon after becoming RNs the majority of these individuals return to school.

Mechanisms for encouraging the movement of associate degree RNs into RNB programs can provide for increasing the supply of more highly educated nurses. Although this will not contribute to the overall nursing supply, data would support that increasing the educational level of the nursing workforce will improve patient outcomes. In some settings, employers support educational advancement through tuition reimbursement and flexible scheduling. State employees (such as those at Harborview and University of Washington Hospitals) are allowed to enter tuition exemption programs at state educational institutions. However, these programs were designed to allow state employees to fill otherwise “empty” seats in classes. They do not count toward the college’s required FTE (full time equivalent students) nor are any funds provided for their support. Because of the costs of accommodating these students, many programs have found it necessary to limit the numbers that can be admitted under tuition exemption. The current high demands on staff nurses for working extra shifts and overtime may be a barrier to their moving into further education.

One university provides a licensed practical nurse to baccalaureate degree program. Baccalaureate programs for associate degree registered nurses, commonly referred to as RNB programs, are present on the main campuses of the state universities. In addition, both the University of Washington and Washington State University provide RNB programs at a total of five branch campuses distributed across the state. (See Appendix C and D.)

One state university has developed an online RBN program. This program allows greater flexibility and opportunities for those who are place bound in areas where RNB programs are not located. Because this is a state university, tuition costs are comparable to all onsite programs. This program is growing in numbers of students served.

While online distance RNB programs from a wide variety of private colleges across the country are available, in general the high costs of these programs are a barrier to many. An additional barrier to many online programs is the necessity for the students to procure their own clinical sites and preceptors to meet the clinical requirements of the program.

Graduate Level Programs

Three universities have inaugurated graduate level entry programs. These programs admit individuals with bachelor’s degrees in fields other than nursing and provide preparation for licensure in the first five quarters and then move the students onward in a path toward an advanced practice nurse master’s degree. The NCQAC refers to these as Master’s Entry programs. Most students in these programs are moving into ARNP preparation.

Many of the universities now provide for an associate degree to master’s degree pathway for those with an associate degree in nursing and a baccalaureate degree in another field. These pathways recognized the value of previous education and provide an effective method to increase the numbers of nurses prepared at the graduate level. Some of these students are moving into teaching and leadership roles while others are entering nurse practitioner tracks.

The preparation of individuals with graduate nursing degrees both at the master's and doctoral levels is essential to meeting the needs for faculty and leadership positions in nursing. All of the universities providing undergraduate education, including branch campuses, provide master's degree programs. Most of these graduate programs provide education that supports the nursing faculty role and the nurse administrative or policy role. All of these programs have tracks that prepare people for advanced practice as nurse practitioners. There is one program preparing for the nurse midwife role and one preparing nurse anesthetists (although this program is housed in an education department rather than a nursing department.)

The development of the doctorate of nursing practice (D.N.P.) is creating a change in graduate preparation in nursing. The DNP is a clinical degree (similar to the PharmD for the pharmacist) that prepares for practice as a nurse practitioner, nurse midwife, or clinical nurse specialist with a basis in practice inquiry. There will be course work with an education focus available. Only one university has instituted the nursing practice doctorate at this time with a second currently planning that change. This is a national trend and major universities are expected to provide the DNP as an option.

One major state university also provides a PhD program in nursing. The PhD supports academic education and research in nursing; these are essential for the future of the profession. The second major state university is currently in the planning stages of beginning a PhD program in nursing.

Applicants to Nursing Programs

All nursing programs in Washington State report more applicants than they can accept. However, anecdotal evidence was clear that many students applied to more than one program. Therefore, accurate information on the "real" number of applicants has not been available. This limited the data upon which to make decisions regarding recruitment.

The Washington Center for Nursing developed a prototype method of determining the real total applicant statewide. Its method included collecting data on the number of qualified candidates then subtracting the number of admissions to determine the number of qualified but not accepted applicants. The admitted students were then polled by the directors of their programs as to how many additional programs to which they had applied. After these numbers of additional applications are deducted from the number of qualified but not accepted a more accurate view of the number of qualified applicants being turned away could be determined.

Data from the WCN are not yet complete but it appears that there may be an approximately 25% overlap in applications. The Workforce Training and Education Coordinating Board (2006) estimates that Washington State needs approximately 690 more RN graduates annually to address the workforce issues. It appears that the number of qualified applicants not accepted would meet this need. The students are ready if the capacity were available. Yet to be completed is an analysis of the programs' waiting lists to determine if those applicants mirror the experience of the accepted students, which would provide deeper information on the potential student pool. Due to confidentiality issues, this will require more time to complete but is essential to the accuracy of data.

According to the Workforce Training and Education Coordinating Board there is a lack of diversity in the health care workforce. This exacerbates health disparities among ethnically diverse populations. Recruitment of men and minorities will continue to be

important if the nursing programs are to meet the needs of the citizens of the state. Ethnically diverse populations are also the fastest growing labor pool in the state. While state law prohibits any differential admissions based on ethnicity or gender, the numbers of minority admissions will rise as the applicants from those groups rise.

Retention/Attrition/Graduation Rates

Once qualified individuals are admitted, retaining them to graduation enhances the nursing supply. When a student leaves a nursing program before graduating, that potential addition to the nursing workforce is permanently lost. Another student cannot be added to an advanced level to replace the one who left. Many factors that educational institutions do not control affect attrition. These include student language difficulties, study skills deficits, personal crises, health issues, financial difficulties, and decisions about career directions. Many successful strategies that have been instituted to address retention are based in grant funding and could not be sustained with only standard financial support. Some of these strategies have included special language support for the non-native speaker, counseling regarding individual personal/family issues, special study skills help, and additional financial aid. New funding plans from the State Board of Community and Technical Colleges may make some of these strategies more widely available. Sharing information regarding successful strategies that improve retention would be valuable to all programs.

Both the Commission on Collegiate Nursing Education (CCNE) which accredits only baccalaureate and higher degree programs and accredits all of the baccalaureate and higher degree programs in the state and the National League for Nursing Accreditation Commission that accredits nursing programs at all levels and accredits 19 of the associate degree programs in the state, require that graduation rates be calculated and used as part of program evaluation.

All nursing programs calculate graduation rates as part of their self-evaluation processes. With the impact of their varied student make-up, many programs are hesitant to share this information widely where it might not be understood. Because the information is important both to educators and policy makers, standardized methods for calculating graduation rates and the reporting of graduation rates along with other data about student demographics and characteristics might relieve some of the concern about reporting and provide valuable data.

The NLNAC provides a specific formula for calculating graduation rates in order to be able to aggregate data. The NLNAC definition of graduation rate is “the number of students (individuals matriculated and on the formal class roster) who complete the program within 150% of the time of the stated program length (the length of the program adjusted to begin with the first required nursing course)” (NLNAC, 2006a, p.80.) The purpose of using the 150% is that it takes into consideration those who “stop out” for personal reasons such as family issues, pregnancy, and financial constraints but who do return and complete.

In its 2006 report to constituents, the aggregate data collected by NLNAC indicates that the mean graduation rate across the nation in practical nursing programs was 72.6%, in associate degree programs 74.3%, and in baccalaureate programs 80.6% (NLNAC, 2006b) These means have been virtually unchanged over the three year period from 2003-2006. These bench marks can be used by programs for self evaluation. Improvement in these numbers should be a stated goal of all programs.

Success on Licensure Examinations

Washington's nursing programs are very successful in preparing individuals for basic PN and RN licensure with the majority of the programs consistently exceeding the regulatory requirement of 80% pass rate. The pass rates of specific programs vary from year to year but the overall state picture remains remarkably consistent.

In 2006 the state pass rate for LPNs showed 10 programs with 100% pass rate, 9 with 90-99% pass rate, one with 88% pass rate, and only two below 80%. The average pass rate was approximately 94.9% compared to a national average pass rate of approximately 87.9%.

The overall 2006 Washington pass rate for those taking the registered nursing examination for the first time was 91.6% compared to a national pass rate of 88.1%. Only two states had somewhat higher pass rates (91.8% & 92.5%.) For the 36 programs preparing for the RN licensing examination, three programs had 100% pass rates. Twenty programs had 90-99% passing and nine had between 80 and 89%. Only four achieved less than 80%. (NCQAC, 2006) Individual program pass rates may vary year to year based upon particular class characteristics but the general trend of passing is an important evaluation tool.

Table 3 Success Rate on NCLEX Licensure Examinations

Type of License	National Pass Rate 2006	Washington Pass Rate 2006
Licensed Practical Nurse	87.87%	94.88%
Registered Nurse	88.11%	91.59%

Graduates of nurse practitioner programs must pass examinations in their area of focus in order to be eligible for the ARNP license. Because those examinations are given by professional nursing organizations the data regarding pass rates for those individuals are not as available from the NCQAC. However, programs in the state report their pass rates for their accrediting groups and graduates consistently pass those examinations after graduation.

Articulation

The various levels of nursing programs (LPN, ADN, BSN, Master's degree) in Washington State have a long history of collaborative effort. Through the Council of Nurse Educators in Washington State (CNEWS) the deans and directors of all programs at all levels meet together twice yearly to address their common concerns. Working together in the CNEWS organization, an articulation plan for the state was developed. This plan was published in 2002 (CNEWS, 2002). Since that time additional work has been done between individual programs and some programs have developed dual enrollment for students completing the associate degree and moving into the baccalaureate degree. Dual enrollment creates a seamless transition for students and encourages their educational progression. All across the state there are opportunities for individuals to increase their education. In addition to their main campus programs many, such as Washington State University, have developed branch and outreach programs that provide opportunities.

Many community colleges now award an associate transfer degree to nursing graduates. The purpose of this is to facilitate the students' transfer into RNB programs in universities that are part of the transfer agreement system within the state.

One development by universities was the plan for assisting associate degree registered nurses with a bachelor's degree in another field to enter directly into graduate nursing programs without first requiring that the student complete an RNB program. This has created a shorter path with less redundancy for those associate degree graduates whose interests lie in advanced nursing roles.

More recent developments were the intensive or accelerated master's entry programs. These allow individuals holding bachelor's degrees to enter into the graduate level, achieve RN licensure part way through the program, and then continue on to complete the master's degree. These programs require a very high time commitment and thus are useful to a select segment of the potential nursing student population. They are also self-supporting and thus expensive for the student. State support for these programs in the state universities would make them attractive to more students.

Traditional master's in nursing programs or clinical nurse leader programs with a focus on nursing education would be able to admit more qualified students if they had the qualified applicants. However, applicants often investigate and learn that there are few full-time benefitted positions for new nurse educators. The majority of expansion (while not all) has relied heavily on the use of part time faculty. This may deter individuals from applying for these graduate programs. The effort and cost of the graduate education would not be rewarded. Recruitment of individuals into master's programs with the assurance that appropriate positions are available upon graduation would do much to increase the applicant pool and availability. Availability of employment is especially important in trying to recruit minorities into nursing education.

Efforts of Washington Nursing Programs Toward Improving the Nursing Supply

A significant effect on the nursing supply has been the development of new nursing programs in the state. One new licensed practical nursing program was established. One college that provided only the second year to enable LPNs to attain the associate degree added a first year LPN program. Four programs preparing licensed practical nurses, added a second year to prepare associate degree registered nurses. The college with the new licensed practical nursing program is currently seeking approval for the second year to add the associate degree.

The three master's entry programs were developed to appeal to an expanded applicant pool. These programs have been successful in attracting second career individuals.

The Washington State Nursing Care Quality Assurance Commission requires each approved nursing program to submit an annual report. In 2005 the annual report data from 2001 to 2005 were summarized and analyzed by the NCQAC in its Annual Report 2004-2005. The following data are from that report.

In the four academic years from fall 2001 through spring 2005 there were significant increases in numbers of graduates:

- 45% increase (from 522 to 759 in the number of practical nursing graduates
- 48% increase (from 1173 to 1739) in the total number of graduates prepared for RN licensure. These included:
 - 48% increase (from 799 to 1179) in the number of associate degree in nursing graduates prepared for RN licensure
 - 50% (from 374 to 560) increase in bachelor of science in nursing and master's entry graduates

Additionally, directors of nursing programs were asked to predict their enrollment increases. The numbers indicated an increase of 76% in enrollment from 2000 to 2005. They projected a further increase of 20% by 2010. (See Table 4.)

Table 4 Changes in Nursing Graduates in Washington State 2001-2005

Type of Program	Number of Programs in 2001 (includes newer campuses)	Number of Programs in 2006 (includes newer campuses)	Number of Graduates 2001	Number of Graduates 2005	Predicted Increase in Graduates by 2010
Practical Nursing	20	24	522	759 45% increase	Not available
Associate Degree Nursing	21	27 (plus 1 in planning)	799	1179 48% increase	Not available
Bachelor's Degree	7	8	374	560 50% increase	Not available
Master's Degree Entry	0	3			At UW will phase out into a DNP entry program (see phase out of ARNP at master's level below)
TOTAL RN	28	36	1173	1739 76% increase	Est. 20% increase 2005 (2087)
RNB	8	9	?	251	Est. 10% over 2005 (275)
Master's Degree Post licensure NOT ARNP	10	11	93 (Data for 2003)	69 26% decrease Includes 24 with Nsg Ed Focus	20 20
Master's degree ARNP License Eligible	6	96	Data for 2003 120	170 42% increase	Will decrease as ARNP master's programs are converted to DNP but same number of ARNPs

Type of Program	Number of Programs in 2001 (includes newer campuses)	Number of Programs in 2006 (includes newer campuses)	Number of Graduates 2001	Number of Graduates 2005	Predicted Increase in Graduates by 2010
Doctorate in Nursing Practice	0	1	0	0	Expect 20 per year initially and increase as nurse practitioner master's degrees are converted to DNP
PhD	1	1 in 2006 1 new Program in 2007	14 (one program)	15 (one program)	20

Even more important than graduation numbers are the numbers taking the national licensing examination. Over five years nursing programs reported increases in those taking the licensing examinations.

- 76% increase for LPN (from 579 in 2001 to 1018 in 2005)
- 140% increase for ADN programs (from 487 in 2001 to 1169 in 2005)
- 31% for BSN/ME programs (from 464 in 2001 to 608 in 2005)
- 87% increase (from 951 in 2001 to 1777 in 2005) in the total number of first-time RN examination test takers.

(See Table 5.)

Table 5 Increases in Numbers Taking Licensing Examination 2001-2005

Type of Program	Number Taking Licensing Exam 2001	Number Taking Licensing Exam 2005
Practical Nursing	579	1018 76% increase
Associate Degree Nursing	487	1169 140% increase
Bachelor's Degree Entry Master's Entry	464	608 43% increase
TOTAL	951	1777 85% increase

Based on a legislative mandate, in 2005 the HEC Board sponsored a work group that prepared a Pre-Nursing Direct Transfer/Major Ready Pathway Agreement. This agreement systematized the process for students beginning their studies at community colleges with a plan to transfer to one of the state universities for the generic BSN program. This DTA was endorsed by all the universities in the state, both public and private. While this agreement simplifies student planning, it does not affect nursing supply because there is still inadequate capacity in the BSN programs resulting in many qualified students being placed on waiting lists

Costs to Students

While many have expressed concern about the rising tuition and fees for nursing education, the HEC Board report (HEC Board, 2006b) demonstrates that tuition and fees for both the flagship state universities and the community colleges are very close to average in the nation. This does not discount the fact that all tuition and fees nationally have risen faster than the overall cost of living putting financial stress on students and families. Another factor in the cost of education is the decreasing availability of financial aid. Pell Grants have not kept up with rising costs. Both low and middle income students are affected by changes in loan availability and interest rates. The table below provides data on the costs for tuition and fees for education in the state community colleges and state universities where nursing programs exist. The HEC Board information does not include the private universities but their tuition and fees have also increased.

Table 6 Costs for Nursing Education in Washington State

Level of Education	Total Annual Tuition and Fees	Percent Increase
Community Colleges	\$2586	5.8% increase 2006-07 over 2005-06 30.5% increase in last 4 years
State Universities where nursing is offered		
<ul style="list-style-type: none"> • Resident undergraduate Programs 	\$5880	6.8% increase 2006-07 over 2005-06 28.8% increase in last 4 years
<ul style="list-style-type: none"> • Resident Graduate Programs 	\$8963	6.7% increase 2006-07 over 2005-06 39.2% increase in last 4 years

Challenges Facing Nursing Education

A major challenge for nursing programs is acquiring the resources needed both for maintenance and for expansion. Nursing education requires a variety of resources for effective operation. While increasing the size of programs and adding new programs both increase the demand on resources, new programs place greater demands on the system. Each new program requires administrative costs, infrastructure for classrooms, laboratories, and library resources as well as costly effort in developing curriculum. A new program must establish new clinical relationships and community support. With the constraints of funding for educational systems, it would appear that focusing expansion on increasing the size of existing programs would be more cost effective.

Classroom Space

Classroom space is an important resource needed for all nursing programs. Within most of the community colleges, classroom space has been a limiter for expansion. In today's heavily impacted colleges, the unavailability of classroom space may be a barrier to expansion of existing classes. To address space needs, thirteen community colleges have been funded for new or renovated buildings for health education programs within the last 10 years (Price, 2007.) Some of these are recent decisions and colleges are in the design phase. Nine of these programs with new construction were identified in the survey regarding building needs. Within that same time period both state universities have had updated

facilities either on newer campuses or on the main campus for nursing education. The private universities have all updated and/or expanded their nursing education facilities within that same time period. This is not to imply that the changes have met the needs. Often the changes are improving the education of existing students, not making space for additional students. Seven community colleges reported receiving no support for updated or new spaces for nursing. Many programs are at the limits of the spaces currently available to them. Classrooms will not hold more students and additional classrooms are not possible given the competing demands within the institution. See Table 7.

Table 7 Survey Results: Increase/Change of Space for Nursing Programs

		Number of Programs Responding to Survey	No Change	Increased space assigned	Renovation of current or newly assigned space	New Construction	Plan for new construction
Community Colleges							
	Practical Nursing	3	2	1	1		1
	Step Programs	12	2	8	6	3	3
	RN Only	8	3	3	3	2	1
Universities							
	Public (Newer campuses counted independently)	7	4	0	2	1	1
	Private	6	1	4	5	1	
TOTAL		36	12	16	17	6	6

Notes: Some colleges received additional space and remodeling prior to construction of a new building and are noted twice in the table but counted once in numbers of programs responding..

Laboratory Space/Equipment

The space and equipment needs for skills laboratories for nursing are considerable. Teaching modern health care techniques and strategies requires laboratories that reflect current clinical environments. These laboratories are costly to set up and maintain. Many programs are instituting the use of computerized simulation models to increase student skills and problem solving abilities before they enter clinical environments. Members of CNEWS have been able to arrange for a discounted group purchasing opportunity to enable the purchase of computerized simulation equipment. However, these systems remain very expensive. These simulation models have challenges relating to the learning needs of faculty, the time involved in developing appropriate scenarios, and teaching the small groups (usually 4 or 5) who can comfortably work with a mannequin at one time. In the spring of 2007, the National League for Nursing announced a collaboration with Laerdal Corporation (a manufacturer of one type of computerized patient simulation system) to provide an online educational program for faculty learning to use the computerized systems and a forum for faculty across the country to share simulation scenarios that they have developed. These could be helpful resources for nursing programs. Clinical simulations have many values but students will still need to have

significant clinical experiences with real patients and interactions with real health care colleagues.

Clinical Sites

Clinical sites for student experiences are essential for all levels of nursing programs. Almost all programs use long term as well as acute care settings and many have expanded their use of community out-patient sites. Twenty-six of the 40 nursing programs reporting stated that a lack of clinical sites is inhibiting their ability to expand. Twelve programs have been displaced from clinical sites by the needs of other programs. (NCQAC, 2005). With the large numbers of programs in the Puget Sound region, having adequate clinical sites appear to be most problematic there.

While some individuals outside of nursing education have suggested that simply using additional hospital shifts would ease the pressure, the data do not support that approach. Twenty-five programs use evening shifts, seventeen have added additional day shifts, eight have added weekend shifts and two have added summer clinical sections. (NCQAC, Annual Report 2005.) Patients need to sleep at night and facilities do not want larger numbers of people on site that might further disturb patient rest. Many clinics, special procedural areas, and ambulatory sites either close or operate at greatly reduced volume on the weekends. Even traditional in-patient units often have decreased census on the weekends. Nevertheless, some programs have experimented with using preceptorships on night shifts (adding only one person to a unit) and at least one is focusing on weekend hours with selected experiences on week days.

Some of the barriers to use of clinical sites for additional shifts include:

- The reluctance of facilities to have students involved in care of the same patients on multiple shifts and days. This can impact patient satisfaction due to changing care givers and the perception that they are always subjects of student learning.
- The stress on clinical agency staff of relating to large numbers of students (especially when students are at differing levels of preparation and from different schools) while maintaining quality of care for patients. This changes their work patterns and patient relationships and challenges their time management.
- The difficulty of finding faculty if clinical sections are assigned permanently to undesirable schedules such as weekends. (While staff nurses are paid premiums for evening and weekend work, no such incentive is available for nursing faculty.)

Clinical sites in the areas of obstetrics, pediatric, and psychiatric nursing are in especially short supply and great demand. The NCQAC noted that in general the number of clinical hours required increases with the level of the program but within that are some outliers in which LPN programs require more clinical hours in a specialty than the average for baccalaureate programs. A coordinated plan by nursing programs in cooperation with the NCQAC for the use of clinical sites based on the level of the program would require curricular and faculty changes for many programs but could result in a more systematic and effective use of this valuable resource.

Faculty

Finding adequate, qualified faculty continues to be a challenge for nursing programs. The need for nurse educators is particularly acute and essential to the ability to meet the needs for basic preparation for licensure. Nursing programs preparing students for registered nurse licensure seek faculty with advanced degrees in order to support standards of academic education. Barriers to recruitment include salaries which were discussed previously and the

lack of individuals with graduate degrees in nursing. The numbers of graduates with master's degrees focused on teaching nursing dropped 26% between 2003 and 2005. This further affects the ability of programs to recruit faculty. (See Table 4.)

Twenty seven programs stated that they had hired additional part time faculty and 24 have added full-time faculty. Many programs have had to request waivers from the NCQAC to hire clinical faculty with bachelor's degrees because there were no applicants with master's degrees. Some programs have developed strategies for sharing faculty and others have developed mechanisms to share qualified individuals with clinical agencies. (NCQAC, 2005) In a 2005 CNEWS survey, associate degree programs reported seven faculty positions unfilled while baccalaureate programs reported a total of nine unfilled faculty positions. Practical nursing programs had all positions filled however they are able to hire bachelor's prepared faculty. One program noted on the survey that their full time faculty members were teaching overloads in order to "make things work."

Many programs are expanding by hiring more part time faculty. Individuals with master's degrees are often seeking full time positions with benefits and a career path. Increasing the number of part time positions versus full time positions may make it more difficult to recruit. An approach being explored by at least one university is the development of an educator/clinician role in which the individual works part of the time for the university and the other part of the time for the clinical agency and is eligible for promotion and tenure as would be a full time faculty member.

The NCQAC regulations require a ratio of not more than 1 instructor to 10 students in the clinical area. This may be decreased if either the patient acuity or level of students would indicate this is necessary. Nationally, nursing programs report 6.3 to 9.4 students per clinical instructor (NCSBN, 2006). Many states require a maximum of 8 students per instructor. One Washington baccalaureate program formerly using a 1:6 ratio for clinical increased the ratio to 1:8 in order to manage the shortage of faculty (NCQAC, 2005.)

Competency Congruence

"Competency congruence" is the fit between the competencies with which new graduates enter the workplace and the needs and expectations of the workplace. This has been a growing issue as the supply of nurses relative to needs has decreased. With high demand for nurses, employers want new graduates who can move rapidly into nursing roles after graduation. Unfortunately, this sometimes translates into expectations for practice that are unrealistic for the brand new entry level person. Expertise arises from experience over time. However, nursing education must focus on preparing graduates to provide safe and effective care in the modern health care environment. Employing agencies have obligations to address issues of transition to their environments and integration into professional practice.

Competency Statements by Nursing Organizations

Educational organizations have developed sets of competencies for their graduates. The AACN competencies address the graduate of baccalaureate program (AACN, 1999). These competencies are currently undergoing revision. The NLN published competencies of the graduates of baccalaureate and associate degree programs in the 1990s and have not been updated. In Washington State CNEWS developed a set of competencies related to practical, associate degree, and baccalaureate graduates that were completed in 2002 (CNEWS, 2002). The National Organization of Nurse Practitioner Faculty has developed a set of competencies relative to nurse practitioner practice (NONPF, 2002). Clinical agencies may question

competencies that have been developed by educators without the input of individuals from the work environment.

Advisory Committees: One avenue that programs have used to maintain competency congruence is the use of advisory committees from clinical agencies, employers, and nursing organizations. These committees are required by the State Board of Community and Technical Colleges for all professional-technical programs and in place for every community college. Many of the universities also employ advisory committees to assist them.

Faculty Assignment Patterns: In all of the Washington nursing programs, the predominant pattern of faculty assignment is for faculty to teach in both the classroom and in the clinical setting. Thus the faculty members teaching in the classroom are faced with the realities of the health care system, the patient population, and the needs of individual patients each week as they supervise students in clinical experiences. This helps faculty members to evaluate their curriculum content against the real needs of the students as they provide care.

Faculty Employment and Professional Development: Another avenue programs use to maintain competency congruence is the employment of faculty in clinical agencies. Many faculty members hold part time positions and work week-ends, holidays, and summers for clinical agencies. The individual faculty member bears the burden of this process and in most instances the educational institution has no provision for recognizing these efforts. Systematizing this practice to enable joint appointments presents an option for supporting faculty in maintaining their clinical expertise. Professional development opportunities are essential to ongoing faculty competence. Supporting professional development through both educational opportunities and opportunities to be engaged in the clinical area will assure that nursing programs continue to prepare students for the needs of the health care system.

Simulation Experiences: Computerized patient mannequins and patient care scenarios can allow students to experience specific physiological situations and achieve skill competence. Simulation experiences may provide the ability to develop some important competencies. Simulation equipment is costly and the development of expertise in operating such equipment is essential to effective use. Collaborative efforts may make this more possible.

Student Clinical Experience: Adequate clinical experiences are essential for students to develop the competencies needed upon graduation. With more and more pressures on clinical agencies and the difficulties of finding appropriate learning environments, addressing the issue of clinical placements is crucial. The person-to-person interaction in the clinical environment remains essential to developing interpersonal and collaborative skills as well as the ability to respond to subtle changes in the patient situation.

Curriculum Transformation: Transformation of curricula to educate for the future roles of nurses and to educate using different approaches has emerged as a major focus in nursing education. The National League for Nursing has engaged faculty in a variety of workshops and conversations around these issues. Oregon has undertaken a transformation of its nursing education system including such varied approaches as dual acceptances into both associate degree and baccalaureate education to alteration in the pattern of teaching concepts and skills.

One aspect of the curriculum transformation in Oregon has been the development of curriculum across community colleges that allows for students to transfer institutions when they move residence. The nature of the students attending community colleges means that some find themselves moving through necessity. Currently, transfer between community

colleges in Washington is possible but often requires additional quarters of education because of the wide differences in curriculum structure. As one example, step programs provide part of the instruction in the care of childbearing families in the first year and then return to that area of nursing again in the second year to introduce more complex care. In most of the generic associate degree programs, care of the childbearing family occurs solely in the second year. A student transferring between these types of programs would find themselves either repeating material or taking an extra course in order to attain all the required competencies.

WCN Projects

The Washington Center for Nursing supported a project to analyze what other states have done in regard to the issue of competency congruence. The results of this project (Haynes & Tieman, 2006) will provide input to CNEWS as it develops a master plan for nursing education. Recommendations from that project to CNEWS for its consideration include:

- Provisional licensure for new graduates to provide a transition period of practice
- Extend focused practicum through simulations or preceptors
- Enhance faculty availability by using currently employed nurses at the clinical site as clinical instructors
- Provide information and support regarding the need funding for high fidelity simulation abilities.
- Expand the congruency taskforce to include all levels of nursing education and service providers.
- Adopt the Benner *Novice to Expert* (Benner, 2001) model for competency measurement.

Planning for the Future of Nursing Education

Planning for the future needs to take into consideration the current situation, the nursing needs of the state, the movements occurring on a national level in regard to nursing education, the various stakeholders in the process and the plans that have already been developed.

Stakeholders in the Future

There are many stakeholders in planning to meet the nursing needs of the residents of Washington. As CNEWS works on a Master Plan for Nursing Education, other organizations, groups, and commissions are simultaneously considering aspects of the current shortage. In a paper prepared for the Washington Center for Nursing, Hare (2006) identified many of the stakeholders listed in Appendix E. Tables 8-11 provide a list of major stakeholders with the focus and contact information for each. They are listed alphabetically within the categories of Statewide Stakeholders, Relevant State Nursing Organizations, Labor Organizations Representing Nursing, and Relevant National Nursing Organizations. Interfacing with these organizations/groups and considering their viewpoints will be essential to the success of any master plan.

Table 8 Statewide Stakeholders in Nursing Education Planning

Organization/Group	Major Focus	Contact Information
Access for Higher Education in Washington State Project	Includes seven University of Washington based collaborative education projects in conjunction with the community and technical colleges	Louis Fox, Vice Provost, University of Washington lfox@u.washington.edu
Department of Social & Health Services	Oversees health care needs for those receiving a wide variety of state funded social services.	Robin Arnold-Williams, Secretary DSHS Headquarters, (OB2) 1115 Washington St. SE Olympia, WA 98504
Eastern Washington Area Health Education Center (EWAHEC)	Focuses on health professions education and training, recruitment, and retention, especially for rural and underserved communities.	Chris Blodgett, Interim Director: blodgett@wsu.edu
Healthcare Personnel Shortage Task Force	20 leaders from business, labor, and education creating a plan to address healthcare personnel shortages in Washington	Michelle Johnson Task-Force Chair Chancellor Pierce College MJohnson@pierce.ctc.edu
Higher Education Coordinating Board of Washington State	Identify needed programs Recommend funding Recommendations to legislature regarding higher education programs	James E. Sulton Jr., Executive Director jamess@hecb.wa.gov
Homecare Association of Washington (HCAW)	Organization of home health, hospice, and home care agencies.	Linda Dahl, President Group Health Cooperative dahl.l@ghc.org
Nurse Members of the Washington State Legislature	Legislative needs of the residents of Washington State	Senator Rosa Franklin Senator Margarita Prentice Senator Cheryl Plug Rep. Eileen Cody Rep. Dawn Morrell Rep. Judy Clibborn Rep. Tami Green
Nursing Care Quality Assurance Commission	Responsible for administering licensing laws and developing and administering licensing regulations for all levels of nursing personnel.	Paula Meyer, Executive Director Paula.meyer@doh.wa.gov
Prosperity Partnership	Regional consortium of government and businesses from King, Kitsap, Pierce, and Snohomish Counties	Bob Drewal, Executive Director BDrewel@psrc.org
Reforming States Group (RSG)/Milbank Memorial Fund	An association of leaders from 40 states addressing health policy in legislative and executive branches of government.	Eileen Cody, National Reforming States Group Steering Committee Member Cody.eileen@leg.wa.gov
State Board of Community & Technical Colleges	Control establishment of new programs and funding of current programs in all community & technical colleges in the state	Charley Earl Executive Director cearl@sbctc.edu
Washington Assn of Community & Technical Colleges President's Group	Develops policy recommendations for the system	Linda Kaminski, President Yakima Valley Community College lkaminski@yvcc.edu

Organization/Group	Major Focus	Contact Information
Washington Association of Housing and Services for the Aging (WAHSA)	A coalition of not-for-profit organizations and other affiliated members dedicated to providing quality housing, health, community, and related services to the elderly.	No local contact available WAHSA 1570 Wilmington Dr. Suite 220 DuPont, WA 98327
Washington Center for Nursing	To contribute to the health and wellness of Washington State residents by ensuring that there is an adequate nursing workforce to meet the current and future healthcare needs of the citizens of the state of WA.	Linda Tieman, Executive Director tiemal@spu.edu
Washington Healthcare Association (WHCA)	Organization representing over 400 privately owned assisted living and skilled nursing facilities.	Gary Weeks, Executive Director garyweeks@whca.org
Washington State Hospital Association	An advocacy group for hospitals that makes recommendations on issues that affect health care delivery, quality, accessibility, affordability, and continuity of care.	Leo Greenawalt, President and CEO leog@wsha.org
Western Washington Area Health Education Center (WWAHEC)	Works to assure equity of and access to health care for underserved rural and urban populations in western Washington.	Laurie Wylie Executive Director 2033 Sixth Avenue, Suite 310 Seattle, WA 98121 Phone 206-441-7137 Email: Laurie@wwahec

Statewide organizations that represent nurses in both education and practice are an important resource for any planning. These organizations have an interest in how any decisions about nursing education will affect current practicing nurses and how well prepared new nurses are to join the nursing workforce. See Table 8 below.

Table 9 Relevant State Nursing Organizations

Organization	Role	Contact Information
Council of Nurse Educators in Washington State (CNEWS)	Forum for deans and directors of nursing programs at all levels to address concerns common to nursing education.	Carl Christensen, President Dean, Northwest University Nursing Program
Northwest Organization of Nurse Executives (NW-ONE)	Organization of nursing leaders in health care delivery organizations that addresses issues of nursing care delivery.	Gladys M. Campbell, Executive Director, GladysC@wsha.org
Washington State Nurses Association (WSNA)	Professional organization for registered nurses in Washington State. Has arm that serves as labor representative.	Judy Huntington, Executive Director jhunting@wsna.org

In Washington State the majority of nurses work in collective bargaining environments. In some of those environments the labor relations arm of WSNA serves as the collective bargaining agent. Other nurses are represented by collective bargaining labor organizations that represent many health care employees other than nurses and even employees in arenas other than health care.

Table 10 Labor Organizations Representing Nurses.

Organization	Role	Contact Information
Service Employees International Union SEIU 1199 Northwest	Union representing health care workers including nurses in hospitals, home care, and nursing homes in Washington	Diane Sosne, President union@seiu1199nw.org
United Staff Nurses Union USNU UFCW Local 141	Union representing nurses in specific hospitals	31620 23rd Ave. South, Suite 304 Federal Way, WA 98003, 1-800-468-3856 mail@ufcw141nurses.org

Nursing organizations at the national level have an interest in the integrity of nursing and nursing education across the country. Nurses are mobile and licenses may be easily moved to different states. Decisions about nursing education that conflict with national expectations are unlikely to be supported. See Table 9 below.

Table 11 Relevant National Nursing Organizations

Organization	Role	Contact Information
American Nurses Association (ANA)	National professional organization of nurses	515 Georgia Avenue Suite 400 Silver Spring, MD 20910 301-628-5000
National League for Nursing (NLN)	An organization that focuses on excellence in nursing education	generalinfo@nlm.org .
National League for Nursing Accrediting Commission (NLNAC)	Accredits all levels of nursing education programs	Sharon Tanner, Executive Director stanner@nlnac.org
American Association of Colleges of Nursing (AACN)	An organization of baccalaureate and higher degree nursing programs.	Mona Frole mfrole@aacn.nche.edu
Commission on Collegiate Nursing Education (CCNE)	Accredits baccalaureate and higher degree programs	Jennifer Butlin, Director jbutlin@aacn.nche.edu (202)-887-6791

HEC Board Master Plan

As part of its Master Plan for Higher Education the HEC Board reported (HEC Board, 2005, p.19) that in June 2005, a two-year/four-year college work group completed a new associate degree pathway for nursing. According to Higher Education Coordinating Board 2006 Final Report (HEC Board, 2006, p. 10) regarding the higher education needs in Washington State, “close to half of the need [for degree programs] in medical professions is due to training needs for nurses, so increases in nursing programs would be recommended.”

Further the HEC Board Report (2006 p.8) notes that “within the medical professionals category the majority of new registered nurses are initially trained at the associates level...., however, the majority of practicing nurses hold a bachelor’s degree or higher and additional training needs of nurses account for 47 percent of the ultimate demand portion of the medical professionals...” The report further concluded “Nursing education is in high demand at the entry level (predominately provided at the associate degree level, but also substantial numbers of new nurses receive initial preparation at the baccalaureate level) but there is also need for students to continue on for master’s and doctorate degrees in nursing to train the next generation of nurses” (Ibid p.11)

Increasing the number of associate degree graduates will provide needed health care and also provide individuals to move forward into baccalaureate and graduate education. Increasing the number of baccalaureate prepared nurses through both generic baccalaureate and RNB programs will provide a greater number of individuals having a broader background to offer to the citizens of the state. Evidence exists that increasing the educational level of nurses increases the quality of care. Given the current success of the associate degree programs in the state, measures that would facilitate coordination between enrollment in community college nursing and enrollment in bachelor's degree completion would have the greatest potential for meeting the HEC Board identified need.

The HEC Board supports funding for "high demand" areas. These funds have not been specifically targeted for nursing although some colleges have used them for that purpose. With the current needs, the HEC Board could target support for expansion of nursing education at the basic level, at the RNB level, and at the graduate level.

Conclusions

As health care becomes more complex, the need for a well prepared nursing workforce grows. Nurses educated at all levels contribute in a wide variety of ways to the health of the public. There are shortages of registered nurses at all levels (associate degree to doctoral degree) with a serious shortage of master's prepared nurses available to allow the expansion of nursing education.

The diversity of the population needs a corresponding diversity in the nursing workforce. Avenues to increase diversity in applicant pool will be significant. While the recruitment of foreign educated nurses may assist in alleviating the shortage, this process also requires an effective educational program to enable appropriate transition to the U.S. health care system.

Nursing education in Washington State has demonstrated success in preparing individuals for licensure and employment at all levels in the health care system. Articulation planning has created effective avenues for nurses to move forward from one level to the next. Nursing programs are committed to educating more nurses to enter the profession at every level. Nevertheless, without addressing capacity issues nursing programs cannot increase their enrollments to meet growing demand regardless of the number of applicants. Capacity issues are driven by fiscal support, space constraints, the availability of faculty, and clinical site availability.

Preparation of new nurses requires collaborative efforts between educational institutions and health care agencies. Both must be committed to planning for clinical education and for the transition of new graduate to professional practice.

Filling faculty positions will require attention to the issues of the availability of graduate education as well as issues related to the desirability of faculty roles. Addressing faculty salaries, mechanisms for faculty to maintain expertise, and work life issues for all nurses will be essential.

Many stakeholders must be acknowledged in any planning for the future.

Recommended Next Steps

1. Develop new nursing education programs or expand existing programs only after a comprehensive plan for nursing education in the state is developed and the proposed

programs/expansions are shown to be compatible with the master plan. (The Washington Center for Nursing has a legally binding agreement with the WA State Department of Health to submit a Master Plan for Nursing Education in WA State by December 2007. WCN is consulting with and supporting CNEWS in this work, which was initiated in fall 2005.)

2. Gather and analyze data relative to the locations where shortage is present and the types of nurses needed in those settings including those with graduate preparation as well as those entering licensure.
3. Complete the Strategic Master Plan for Nursing Education including in the plan:
 - Goals for the overall number of student places for each level of student in each region throughout the state
 - Strategies for increasing the diversity of the nursing applicant pool and for the success of qualified nursing students.
 - Strategies for recruiting and retaining qualified faculty
 - Recommendations for regional mechanisms to effectively allocate scarce clinical resources
 - Recommendations focusing on curriculum including:
 - Consistent pre-requisite requirements across all community college nursing programs and across all RNB programs.
 - The number of clinical hours for specialty areas at differing levels of nursing education
 - Curricula for nursing at all community college nursing programs that would facilitate the students' ability to transfer within the state when residence changes
 - The use of technology such as simulations labs for nursing education programs
 - Support for innovative models of both didactic and clinical education in nursing.
 - Strategies to facilitate the movement of associate degree nurses into baccalaureate nursing education.
 - Recommendations regarding the resources, including capital needs, required to sustain an effective nursing education system for the state's nursing needs.
 - Development of partnership strategies to expand capacity especially in the critical area of preparing master's degree prepared nurses for teaching and provide funding for salary improvements for nursing faculty.
4. Promote funding mechanisms through the legislature, the HEC Board and other relevant agencies to support the implementation of the Master Plan for Nursing Education.
5. Develop ongoing, effective collaboration between education and practice through CNEWS and NWONE to facilitate competency congruence, faculty development, the transition of new graduates to effective participation in health care, and retention of nurses in the workforce.
6. Encourage a culture of innovation, forward-thinking, risk-taking and collaboration in addressing the many challenges and issues facing health care and specifically nursing/nursing education in the future

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Appendices

Appendix A

Washington LPNs, RNs, & ARNPs with Active Licenses by Workforce Development Area* (WDA)

Workforce Development Area	Name & State Location	Active LPN Licenses per 100,000 population (Total Number)	Active RN Licenses per 100,000 population (Total Number)	Active ARNP Licenses per 100,000 population (Total Number)
1	Olympic Consortium: Clallam, Jefferson, & Kitsap Counties	210 (709)	1051 (3556)	56.8 (192)
2	Pacific: Grays Harbor, Lewis, Mason, Pacific and Thurston	334 (1488)	870 (3873)	48.9 (218)
3	Northwest: Island, San Juan, Whatcom, and Skagit Counties	310 (1215)	907 (3551)	43.7 (171)
4	Snohomish County	167 (1100)	911 (6011)	38 (251)
5	Seattle-King County	145 (2619)	971 (17,533)	62 (1120)
6	Pierce County	365 (2777)	801 (6099)	40.2 (306)
7	Southwest: Clark, Cowlitz, Skamania and Wahkiakum Counties	128 (650)	812 (4108)	33.4 (169)
8	North Central: Adams, Chelan, Douglas, Grant and Okanogan Counties	220 (533)	808 (1960)	35.1 (85)
9	Tricounty (South Central): Kittitas, Klickitat and Yakima Counties	164 (489)	727 (2171)	38.9 (116)
10	Eastern Washington: Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Stevens, Walla Walla, and Whitman Counties	198 (394)	1044 (2074)	45.8 (91)
11	Benton-Franklin Counties	153 (342)	898 (2000)	35 (78)
12	Spokane County	226 (997)	1228 (5420)	79.6 (351)
TOTAL	Washington State	211 (14,629)	925 (71,048)	49.9 (3858)
	United States	211	991	Not available

*Location determined by license mailing address
Data from Center for Health Workforce Studies, 2006a, b ,c

Appendix B

Washington State Nursing Commission Approved Schools of Nursing

Practical Nursing Programs (LPN)

Bates Technical College PN Program 1101 S Yakima Tacoma, WA 98405 Phone: (253) 680-7000	Green River Community College Nursing Department 12401 SE 320 th St. Auburn, WA 98002 Phone: (253) 833-9111	Skagit Valley College – Mt Vernon * Nursing Department 2405 E. College Way Mt Vernon, WA 98273 Phone: (360) 416-7873
Bellingham Technical College * 3028 Lindbergh Avenue Bellingham, WA 98225 Phone: (360) 752-7000	Heritage College Nursing Program 3240 Fort Rd. Toppenish WA 98948 Phone: (509) 865-8500	Skagit Valley College – Whidbey Island 1900 SE Pioneer Way Oak Harbor, WA 98277 Phone: (360) 675-6656
Big Bend Community College * Nursing Department 7662 Chanute St. Moses Lake, WA 98837 Phone: (509) 793-2222	Lake Washington Technical College * Nursing Program 11605 132 nd Avenue NE Kirkland, WA 98034 Phone: (425) 739-8100	South Puget Sound Community College School of Nursing 2011 Mottman Rd. SW Olympia, WA 98512 Phone: (360) 754-7711
Centralia College * Nursing Program 600 W Locust Centralia, WA 98531 Phone: (360) 736-9391	Lower Columbia College * School of Nursing 1600 College Way North Seattle, WA 98632 Phone: (360) 442-2370	South Seattle Community College *** Nursing Program 6000 16 th Avenue SW Seattle WA 98106 Phone: (206) 527-3600
Clover Park Technical College * Nursing Department 4500 Steilacoom Blvd. SW Tacoma, WA 98499 Phone: (253) 589-5800	North Seattle Community College * Nursing Program 9600 College Way North Seattle, WA 98103 Phone: (206) 587-4100	Spokane Community College * Nursing Education 1810 N Greene St. MS 2090 Spokane, WA 99217 Phone: (509) 533-7000
Columbia Basin College * Nursing Program 2600 N 20 th Ave. Pasco, WA 99301 Phone: (509) 547-0511	Olympic College * Nursing Program 1600 Chester Ave. Bremerton, WA 98377-1699 Phone: (360) 792-6050	Walla Walla Community College * Nursing Education 500 Tausick Way Walla Walla, WA 99362 Phone: (509) 527-4240
Everett Community College * Nursing Department 2000 Tower St. Everett, WA 98201-1327 Phone: (425) 388-9100	Pierce College – Puyallup * Nursing Program 1601 39 th Avenue SE Puyallup WA 98374-2222 Phone: (253) 840-8400	Wenatchee Valley College * Nursing Program 1300 5 th Street Wenatchee, WA 98801 Phone: (509) 682-6800
Grays Harbor Community College * Nursing Department 1620 Edward P Smith Drive Aberdeen, WA 98520 Phone: (360) 532-9020	Renton Technical College * Nursing Program 3000 NE 4 th Street Renton, WA 98056 Phone: (425) 235-2352	Yakima Valley Community College * Nursing Program PO Box 22520 Yakima, WA 98907-2520 Phone: (509) 422-7800

*Step Program

** Initial Approval of Program (new program granted right to accept students)

Associate Degree Programs (RN)

<p><u>Bellevue Community College</u> Main Campus, Rm R140-A 3000 Landerholm Circle SE Bellevue, WA 98007-6484 Phone: (425) 564-1000</p>	<p><u>Highline Community College</u> PO Box 98000 Des Moines, WA 98198 Phone: (206) 878-3710</p>	<p><u>Shoreline Community College</u> Nursing Program 16101 Greenwood Ave N Seattle, WA 98133 Phone: (206) 546-4101</p>
<p><u>Bellingham Technical College</u> * 3028 Lindburgh Avenue Bellingham, WA 98225 Phone: (360) 752-7000</p>	<p><u>Lake Washington Technical College</u> * Nursing Program 11605 132nd Avenue NE Kirkland, WA 98034 Phone: (425) 739-8100</p>	<p><u>Skagit Valley College – Mt Vernon</u> * Nursing Department 2405 E. College Way Mt Vernon, WA 98273 Phone: (360) 416-7873</p>
<p><u>Big Bend Community College</u> * Nursing Department 7662 Chanute St. Moses Lake, WA 98837 Phone: (509)793-2222</p>	<p><u>Lower Columbia College</u> * Nursing Program 1600 Maple St. Longview, WA 98632 Phone: (360) 442-2370</p>	<p><u>South Puget Sound Community College</u> * School of Nursing 2011 Mottman Rd. SW Olympia, WA 98512 Phone: (360) 754-7711</p>
<p><u>Centralia Community College</u> * Nursing Program 600 W Locust Centralia, WA 98531 Phone: (360) 736-9391</p>	<p><u>North Seattle Community College</u> * Nursing Program 9600 College Way North Seattle, WA 98103 Phone: (206) 587-4100</p>	<p><u>South Seattle Community College</u>*/ *** Nursing Program 6000 16th Avenue SW Seattle WA 98106 Phone: (206) 527-3600</p>
<p><u>Clark College</u> Clark Center WSU Vancouver Campus Vancouver, WA 98663 Phone: (360) 992-2000</p>	<p><u>Olympic College</u> * Nursing Program 1600 Chester Ave. Bremerton, WA 98377-1699 Phone: (360) 792-6050</p>	<p><u>Spokane Community College</u> * Nursing Education 1810 N Greene St. MS 2090 Spokane, WA 99217 Phone: (509) 533-7000</p>
<p><u>Clover Park Technical College</u>* Nursing Department 4500 Steilacoom Blvd. SW Tacoma, WA 98499 Phone: (253) 589-5800</p>	<p><u>Peninsula College</u> Nursing Program 1502 East Lauridsen Blvd. Port Angeles, WA 98362 Phone: (360) 417-6342</p>	<p><u>Tacoma Community College</u> Nursing Program 6501 S 19th Tacoma, WA 98466 Phone: (253) 566-5000</p>
<p><u>Columbia Basin College</u> * Nursing Program 2600 N 20th Ave. Pasco, WA 99301 Phone: (509) 547-0511</p>	<p><u>Pierce College – Puyallup</u> * Nursing Program 1601 39th Avenue SE Puyallup WA 98374-2222 Phone: (253) 840-8400</p>	<p><u>Walla Walla Community College</u> * Nursing Education 500 Tausick Way Walla Walla, WA 99362 Phone: (509) 527-4240</p>
<p><u>Everett Community College</u> * Nursing Department 2000 Tower St. Everett, WA 98201-1327 Phone: (425) 388-9100</p>	<p><u>Renton Technical College</u>* Nursing Program 3000 NE 4th Street Renton, WA 98056 Phone: (425) 235-2352</p>	<p><u>Whatcom Community College</u> ** Nursing Program 237 West Kellogg Rd Bellingham, WA 98237 Phone: (360) 676-2170</p>
<p><u>Grays Harbor Community College</u> * Nursing Department 1620 Edward P Smith Drive Aberdeen, WA 98520 Phone: (360) 538-4026</p>	<p><u>Seattle Central Community College</u> Nursing Program 1701 Broadway Seattle, WA 98122 Phone: (206) 344-4347</p>	<p><u>Wenatchee Valley College</u> * Nursing Program 1300 5th Street Wenatchee, WA 98801 Phone: (509) 682-6800</p>
<p>* Step Program ***Application for initial approval submitted</p>		<p><u>Yakima Valley Community College</u> * Nursing Program PO Box 22520 Yakima, WA 98907-2520 Phone: (509) 574-4891</p>

Baccalaureate Degree Programs (RN)--Prelicensure

Gonzaga University Dept. Of Nursing 502 E. Boone Ave. AD Box 38 Spokane, WA 99258 Phone: (800) 986-9585	Seattle Pacific University School of Health Sciences 3307 3 rd Avenue West Seattle, WA 98119 Phone: (206) 281-2000	Walla Walla College School of Nursing 10345 SE Market Portland, OR 97216 Phone: (800) 541-8900
Northwest University Buntain School of Nursing 5520 108 th Ave. NE Kirkland, WA 98033 Phone: (425) 822-8266	Seattle University School of Nursing 900 Broadway Seattle, WA 98122 Phone: (206) 296-6000	Washington State University Intercollegiate College of Nursing 2917 W Ft George Wright Dr Spokane, WA 99204 Phone: (509) 358-7978
Pacific Lutheran University School of Nursing Tacoma, WA 98447 Phone: (253) 531-6900	University of Washington School of Nursing Box 357260 Seattle, WA 98195 Phone: (206) 543-8736	

***Step Program**

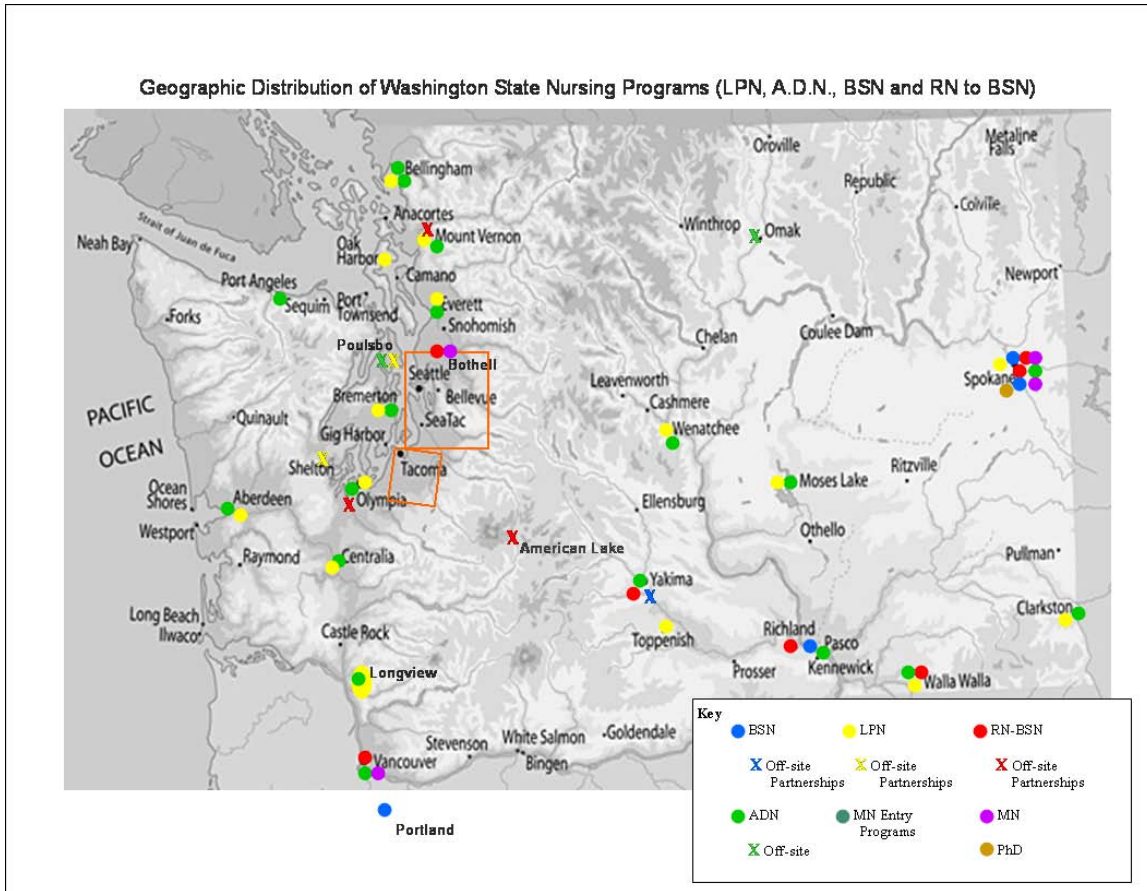
**** Initial Approval of Program (new program granted right to accept students)**

**Masters in Nursing & RN to BSN (RNB) Programs
Including Pre-licensure Master's Entry**

RNB; MSN	Gonzaga University Department of Nursing 502 E. Boone Ave. AD Box 38 Spokane, WA 99258 Phone: (800) 986-9585	RNB; MSN	University of Washington – Tacoma Nursing Program 1900 Commerce - Box 358421 Tacoma, WA 98402-3100 Phone: (253) 692-4000
LPN to BSN; RNB, MSN; Master's Entry	Pacific Lutheran University School of Nursing Tacoma, WA 98447 Phone: (253) 531-6900	BSN; RNB; MN	Washington State University - Spokane Intercollegiate College of Nursing 2917 W Ft George Wright Dr Spokane, WA 99204 Phone: (509) 324-7360
RNB, MSN	Seattle Pacific University School of Health Sciences 3307 3 rd Avenue West Seattle, WA 98119 Phone: (206) 296-6000 Also operates off-site RNB programs in cooperation with clinical agencies.	RNB; MN	Washington State University - Vancouver Intercollegiate College for Nursing 14204 NE Salmon Creek Ave. Vancouver, WA 98686 Phone: (360) 546-9752
BSN; MSN; Master's Entry	Seattle University School of Nursing 900 Broadway Seattle, WA 98122 Phone: (206) 296-6000	RNB; MN	Washington State University - Yakima Intercollegiate College for Nursing 1401 W. Prasch Ave. Yakima, WA 98902 Phone: (509) 494-7900
BSN; MSN; Master's Entry	University of Washington - Seattle School of Nursing Box 357260 Seattle, WA 98195 Phone: 206-543-8736	BSN, RNB; MN	Washington State University – Tri Cities Intercollegiate College for Nursing 2710 University Drive Richland, WA 99352-1643 Phone: 509-372-7183
RNB, MN,	University of Washington - Bothell School of Nursing 18115 Campus Way NE Bothell, WA 98011-8246 Phone: (425) 352-5000 A new RNB off-site program to be located in Mt. Vernon has been approved by the HEC Board.		

Appendix C

Map showing: Geographic Distribution of Nursing Programs Across Washington State
(With square indicating programs in Central Puget Sound)



Map Courtesy of
Mary A. Baroni, PhD, RN
Professor & Nursing Program Director
University of Washington, Bothell

Appendix E

Converging Forces Influencing Nursing Education in Washington State



March 11, 2006 Kathy Hare RN UWB Masters Student
This document is intended to reflect the major organizations and activities potentially influencing the development and successful completion of the CNEWS Master Plan for Nursing Education