

Pennsylvania Coalition for the Advancement of Nursing Education

White Paper

April 2011

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Introduction

The Pennsylvania Coalition for the Advancement of Nursing Education (PCANE) is a group of nurse leaders and nurse educators from throughout the Commonwealth of Pennsylvania. The group has been meeting since the fall of 2007. The vision of PCANE is to achieve a cohesive plan for the advancement of nursing education within the Commonwealth of Pennsylvania.

Organizations

The members of the Coalition represent the Pennsylvania State Nurses Association (PSNA), the Pennsylvania Organization of Nurse Leaders (PONL) and nursing education programs in hospital based programs, associate degree programs and baccalaureate and higher degree programs and practical nursing programs. The members of the Coalition also represent several statewide educational organizations including: the Pennsylvania Higher Education Nursing Schools Association (PHENSA), the Pennsylvania Colleges of Associate Degree Nursing (PCADN) and the Pennsylvania Association of Practical Nursing Administrators (PAPNA). Members of the Coalition are : Andrea Hollingsworth, Chair; Patrick Kenny, Betsy Snook and Patty Gates Smith, PSNA; Marion Burns-Tuck, PONL, and Patty Knecht, Debbie Rahn, Rhonda Maneval, Mary Alyce Nelson, Diane Breckenridge, Lana De Ruyter, Christine Alichnie, Beverly Welhan, nursing education. (See Appendix A for each member and their affiliations)

In October 2007, the group began their work by establishing the goals of the group and identifying strengths, weaknesses, opportunities and trends that have an impact on nursing

education in the Commonwealth of Pennsylvania. The primary goal is to advocate for a seamless career pathway to achieve a nursing workforce at a higher educational level to care for the increased needs of patients across the lifespan. The secondary goal is to advocate for advancing the educational preparation of the nurse to care for the needs of the citizens of Pennsylvania. Seamless articulation is to be the vehicle to increase the preparation of the workforce to get to the minimal requirement of an RN to be a baccalaureate prepared nurse. The group has given a great deal of effort in gathering data concerning the interest of students in continuing their education, the barriers to this advancement, the capacity of schools to handle larger numbers of students pursuing higher degrees and the availability of institutional support. This has been accomplished by surveys designed by the group and were sent to various constituencies.

Future Goal and Project Outcome

The future goal of the Coalition is the development of a model for nursing education for the Commonwealth of Pennsylvania that focuses on a career ladder of education beginning at the LPN level continuing through educational programs for registered nurses through educational programs up to and including doctoral degrees. This model will enable all levels of nurses to seamlessly continue with their education as they desire. The model will also assist to alleviate the shortage of nursing faculty as more nurses will advance their education through the attainment of graduate degrees. This White Paper reviews the work and findings of the Coalition and describes existing models of nursing education and articulation that will hopefully address the needs of the nursing profession in the Commonwealth of Pennsylvania.

Background/Overview

Nursing, as defined by the American Nurses Association (ANA), is the protection, promotion, and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations (Nursing's Social Policy Statement, Second Edition, 2003). Graf (2006) asserts, "Nursing is a dynamic and complex discipline, one that requires skilled, knowledgeable, and autonomous practitioners". Nursing supply and demand projections for the United States over the next several decades focus not only on the need for expanding the number of nurses but also on the increased need for nurses prepared at the baccalaureate and advanced degree levels (Graf, 2006). A critical issue facing the profession in the 21st Century, however, is the lack of qualified nursing faculty to prepare the projected number of nurses needed to meet the healthcare needs of the nation. Significantly more nurses with advanced degrees are needed not only for direct care advanced practice roles but also for faculty positions within educational settings.

Since the American Nurses Association's 1965 position paper, the entry into practice debate has been passionate while the need for entry level nurses remains and continues to increase. The Goldmark 1923 Report through to the Brown 1940 Report brought focus on the transitioning of nursing education from an apprentice to an academia model. At the time of ANA's position paper in 1965 the overwhelming majority of nurses were educated in hospital based diploma programs with a much smaller percentage educated in collegiate programs at either the baccalaureate or associate degree level (Gosnell, 2002). While these reports and position papers brought the issue of nursing education to the forefront, the movement in nursing

educational preparation has since been based on the role of advanced technology in healthcare and the increasing complexity of patient care.

Episodically intense dialogue and debate on the educational level for nursing entry into practice has been realized over the past four decades. During this time there has been considerable change in entry into practice demographics. Data from 2000 (Gosnell, 2002) shows a dramatic decline in hospital based diploma programs while the number of baccalaureate graduates have doubled and associate degree nursing programs have emerged as the major educator of entry level nurses. According to Gebbie (2009), “the increasing intensity and technological complexity of treatment has led to demands for greater quantity and quality of nursing care, although there remains no agreement on the amount and level of nursing required by the typical hospital” (p.85). Thus, even after 60 years of ongoing debate, today’s reality is that three levels of basic nursing entry education continues to prevail in the Commonwealth of Pennsylvania. With a focus on anticipating and meeting the nation’s future healthcare needs, the acceptance of this reality can lead the profession in moving forward and embracing the development of creative and innovative methods that seamlessly advance nursing education from one level to the next.

With this goal in mind, over the past several years a broad representative committee has been meeting to determine how to best advance nursing education in the Commonwealth of Pennsylvania. This committee, the Pennsylvania Coalition for the Advancement of Nursing Education (PCANE), includes representation from all levels of basic nursing education (Diploma, Associate, and Baccalaureate), the Pennsylvania State Nurses Association (PSNA),

the Pennsylvania Association of Practical Nursing Administrators (PAPNA), and the Pennsylvania Organization of Nurse Leaders (PONL). Together the committee membership has engaged in the creation of potential strategies to seamlessly advance an individual along the nursing educational pipeline from basic educational preparation up through doctoral study, thus, promoting excellence of nursing care in the Commonwealth. Data was generated by the committee from student nurses, nursing programs, and employers, and collaborated with the Pennsylvania State Board of Nursing in querying practicing nurses on highest degree attained and thoughts regarding the current nursing workforce. Based on these data findings and the movement of what many considered a blue collar occupation in the early 1950s to a bona fide 21st Century profession, PCANE proffers an imperative that the nursing profession develop and implement strategies for advancing educational preparation for all nurses as part of an ongoing plan of professional development.

Review of the Literature

The Educational Advancement for RNs Briefing Paper (ANA, 2008) gives an evolution of the passage of the 1964 Comprehensive Nurse Training Act. This Federal Act prompted the American Nurses Association (ANA) Education Committee, 44 years ago, to study nursing education, practice and scope of responsibilities. This 1960's study reported the increasing complexity of health care and changes in practice and raised concerns about the level of education of nurses being a hospital-based diploma education instead of a degree education in nursing from a college or university. In the 1960s, as today the majority of nurses practiced in hospitals. This trend led to and continues today to lead to a strong identity and loyalty between nurses and the hospitals where they were trained and became employed (ANA, 2008).

The ANA Education Committee's recommendations resulted in the ANA 1965 "position paper" which declared the minimum preparation for beginning professional nursing practice should be a baccalaureate degree education in nursing. Three levels of nursing education were described in the "position paper":

1. Baccalaureate education for beginning nursing practice,
2. Associate degree education for beginning technical nursing practice,
3. Vocational education for assistants in health service occupations.

In 1978, the ANA House of Delegates reaffirmed the 1965 ANA "position paper" by a resolution which resulted in the recommendation that by 1985 the minimum preparation for entry into professional practice would be the baccalaureate degree. The designation of two levels of nursing practice, professional and technical was reaffirmed. What was envisioned to be an

orderly transition to the educational system of two levels of education never transpired as again noted in the 2008 Education Advancement for RNs Briefing Paper (ANA, 2008).

Today, most of the remaining hospital-based programs award an associate degree or comparable credits in nursing upon completion and continue to receive federal graduate medical education funding for clinical hours completed. Since hospitals have remained the primary site of employment, nurse staffing levels have been directly affected by changes in reimbursement, especially Medicare. At a time when patient demands have increased, nurse staffing has not increased. Rather through nurse attrition, positions have often been replaced with nurse extenders (assistive personnel) resulting in fewer registered nurses per patient ratios, supervising more assistive personnel in the provision of care for increasingly complex patients. In addition to more career choices, it is also believed that during the past two decades fewer high school college preparatory students have expressed an interest in nursing determining the career to be too demanding, undervalued and unrewarding (ANA, 2008).

In the first decade of the 21st century, a revisiting of the baccalaureate degree related to the complexities of health care delivery has resurfaced. Considering the different educational pathways in nursing and the fact that nurses are the major healthcare workers in the United States (AACN, 2009), research related to the educational level of the registered nurse (RN) workforce and effects on patient morbidity and mortality are being considered. Research reveals that a 10% increase in baccalaureate prepared nurses in a hospital's workforce reduces patients' 30 days mortality rates by 5% (Aiken, Clarke, Cheung, Sloane & Silber, 2003). This finding was further confirmed by another study which produced similar results (Aiken, Clarke, Sloane, Lake & Cheney, 2008). Other studies have also shown a link between baccalaureate prepared nurses and

reduced patient mortality or failure to rescue rates (Estabrooks, Midodzi, Cummings, Ricker & Giovannetti, 2005; Friese & Aiken, 2008; Tourangeau, Doran, McGills, O'Brien, Pringle, & Cranley, 2007). These research findings have increased the preference for baccalaureate prepared nurses by employers especially those at Magnet Status or striving to become Magnet Designated.

Goode, Pinkerton, McCausland, Southward, Graham, and Krsek (2001) found that 72% of chief nursing officers (CNOs) noted differences in critical thinking and leadership skills between BSNs and ADN/diploma nurses. The goal of teaching hospital CNOs was for at least 70% of staff to be BSN prepared and 50% desired by community hospital CNOs. Phillips, Palmer, Zimmerman and Mayfield (2002) conducted a study from 1995 to 1998 on diploma nurses and BSN nurses. After attaining the BSN, these nurses demonstrated higher competencies in areas of nursing practice/process, communication/collaboration, leadership, professional integration and research/evaluation.

Reams and Stricklin (2006) conducted a study of ADN and diploma nurses at four hospitals in southwestern Ohio that identified barriers and motivating factors effecting BSN completion. The three most frequently cited motivators were personal fulfillment, salary and career flexibility options. The most commonly stated barriers were time constraints, family responsibilities, work schedule conflicts, and costs. Seventy-five percent of nurses surveyed identified tuition reimbursement as a major concern. Particularly problematic was the need to pay tuition concurrently with course registration. Participants identified online courses, the opportunity to take courses close to home and/or to employment, and reputation of the nursing program as important. Two of the hospitals involved in the study collaborated with local universities to offer onsite courses for BSN completion. Courses were offered one evening a

week and were fully funded by the hospital. Work schedules for the nurses accommodated class attendance. This option was popular with staff and collaborative relationships were established between the hospital and universities. This is a model that a community teaching hospital in the Philadelphia suburban area adapted in a bridge program for RNs to further their educational skill set of evidence-based practice and research to move on to either a BSN or, if a nurse holds a non-nursing degree, an MSN (Breckenridge, 2010a, 2010b, 2007).

Currently in 2010, there are three pathways that registered nurses in the United States, and specifically in Pennsylvania utilize to receive their basic entry level education: the 4 year baccalaureate program (BSN) obtained through colleges and universities, 2-3 year diploma programs mostly through hospitals, and the 2 year associate degree (ADN) program administered predominately through community colleges and some private colleges. One of the Philadelphia suburban colleges also has the ADN and the upper division BSN as the curriculum design which is one of the first and long-standing designs in the United States. Graduates from these three types of programs take the same NCLEX-RN® examination. The question continues to be raised: If diploma, associate degree and baccalaureate prepared nurses have the same licensing credential with similar duties, what then makes the BSN prepared nurse more efficient in reducing patient mortality rates? If this research finding that the BSN reduces patient morbidity and mortality is true, then perhaps focusing on the parameters that makes the BSN prepared nurse more efficient could be incorporated for RNs from other RN type programs to also improve patient outcomes (Bobay, Gentile, & Hagle, 2009).

Recent studies have shown that the educational level of nurses is an important factor in reducing patient mortality. Extensive research by Aiken, et al. (2003) found that the educational

level of nurses is significantly linked with patient morbidity and mortality. In this research, a cross sectional analysis of over 233,000 surgical patients and the educational level of nurses who cared for them were examined. The results showed that a 10% increase in staff nurses with baccalaureate degree or a higher educational level in nursing reduces patient mortality rates by 5%. More recent research by Aiken, et al. (2008) considering the educational level of nurses as part of the hospital environment further supported the link between higher nursing education and reduced patient morbidity and mortality. Findings from this 2008 research study showed that a 10% increase in baccalaureate prepared nurses reduces patient mortality and failure to rescue rates by 4% (Aiken et al., 2008). Estabrooks, et al. (2005) examined the impact of baccalaureate prepared nurses on patients' mortality outcome and found that a BSN or higher nursing education gives an 81% prediction of patients' 30 day mortality. Friese and Aiken (2008) in another study found that the BSN was associated with lower failure-to-rescue rates and reduced patient mortality. Tourangeau et al. (2007) established that increasing the number of baccalaureate prepared nurses by 10% reduces the 30-day mortality rates of patients by 9 fewer deaths in every 1,000. These studies support the hypothesis that baccalaureate prepared nurses possess knowledge and skills that enable them to deliver patient care that reduces patient morbidity and mortality.

Some nursing associations in response to this outcomes research of the 21st century, reflecting safe practices, have promoted the BSN as an optimal minimum level of education for nursing practice. The nursing associations of New York and New Jersey have proposed "BSN-in-10" programs which would require all registered nurses to obtain a BSN in 10 years after receiving RN credentialing (Trossman, 2008). The Education Advancement for RNs Briefing

Paper (ANA, 2008) gives a detailed account of the “RN to BSN in ten years.” It specifically states:

This approach continues to recognize all educational entries into the profession while acknowledging the changing health care environment and associated competencies necessary to adapt to those changes. An incremental approach permits those choosing to enter the profession with a diploma or associate degree to pursue additional skill sets while strengthening entry level competencies; moving from novice to expert. Nursing education advancement with work experience can result in greater relevance for the learner. Baccalaureate nursing education is intended to result in a deeper understanding of the cultural, political, economic, and social issues that affect patients and influence health care delivery. Coursework at the baccalaureate level include such areas of healthcare economics, health informatics, health policy, leadership and research. (p.2)

The Education Advancement for RNs Briefing Paper (ANA, 2008, p.2-3) states that the research cited:

1. Reveals a relationship between advanced education and patient outcomes, such as lower patient mortality
2. Baccalaureate prepared nurses are more likely to report higher job satisfaction scores in relation to opportunities for growth, and to remain in practice longer than others
3. Increasingly more complex healthcare needs of a multicultural aging population underscores the need for advanced education
4. A stronger theoretical base and foundation in nursing research is needed as a result of the shift to evidence-based practice and expansion of more sophisticated technologies, pharmacologic and other treatment modalities.

Sound leadership skills are essential for case management to support the ability to delegate and supervise care provided by dependent practitioners (LPNs) and nurse extenders within the framework of varying care delivery models. Breckenridge (2006), with a collaborative hospital team effort and community partnerships, implemented a career ladder program in a suburban Philadelphia community teaching hospital to reach out to underrepresented populations in the community to give access to health care careers, chiefly nursing. The impetus was from the Hospital Association of Pennsylvania’s video on the Center for Health Careers in

Pennsylvania, created under Governor Edward Rendell's administration, to address four key challenges:

1. Increasing educational capacity,
2. Creating career ladders in health care,
3. Helping employers retain health care workers, and
4. Establishing a regional direct care workforce center as a pilot project.

Porter-Wenzlaff and Froman (2008) responded to the increasing RN demand through an accelerated LPN-to-BSN curriculum.

In view of the present United States economic downturn, hospitals are trying to improve quality of care while cutting costs. Employers seek nurses with BSN or higher education that can deliver the complex care required in today's healthcare settings (American Association of Colleges of Nursing (AACN), 2004). Job opportunities for associate and diploma prepared nurses are becoming very limited. Many hospitals have "BSN preferred" policies in most of their job openings. Obtaining a promotion beyond entry level, without a BSN, is almost impossible despite the nurses' experience (AACN, 2000). The litigious nature of Americans has increased the demand for highly skilled nurse professionals by healthcare administrators and managers (Spear, 2003). Baccalaureate prepared nurses have also been proposed by AACN to be the only preferred nursing graduate to practice in the various healthcare settings (AACN, 2004). This statement, and other specialty organizations with the same statements, have also increased employers' preference for BSN nurses and have reduced the employment flexibility of registered nurses educated at the ADN and diploma level.

Magnet hospitals are increasingly requiring a BSN of new hires while encouraging and even mandating that RNs in their employment return to school for the BSN or if the nurse has another degree, to bridge to the MSN. Magnet hospitals are moving to all or nearly all RN workforces and eliminated or decreasing LPN positions at the bedside. The LPN is encouraged to also return to school to obtain an RN or seek employment opportunities in other health care environments such as in long-term community settings and nursing homes. The military (US Army, Navy, and Air Force) require a baccalaureate degree for nurses to enter the military and receive a commission. Internationally; the baccalaureate degree in nursing is required upon entry into the profession in the Philippines, Australia, Ireland, and half of the Canadian provinces. The Royal College of Nurses voted to support a transition to require a university degree for professional nursing practice. In review of these trends, a recommendation that at least 2/3 of the United States nursing workforce hold a baccalaureate degree or higher by 2010 was presented to Congress by the National Advisory Council on Nursing Education and Practice. This group is appointed by the Secretary of Health and Human Services (ANA, 2008).

According to the AACN, BSN nurses are well prepared for the demands of today's healthcare environments (AACN, 2004). BSN educational programs include detailed courses in humanities, nursing research, nursing management, social sciences, physical sciences, public health and community health in addition to all the courses taught in both diploma and associate degree nursing programs (AACN, 2004). The extra courses in humanities and social sciences help enhance the communication skills of the BSN prepared nurse. Having good communication skills is necessary for effective collaboration with other disciplines of the healthcare team and education of patients on how to comply with their treatments. The critical thinking abilities of BSN prepared nurses are also improved through these extra courses. This is necessary since

nurses must make quick and complex decisions; identifying abnormal assessments to prevent complications or mortality. The extra course work in nursing leadership, research and management give BSN prepared nurses the necessary skills to practice in the numerous nursing roles that nurses play in today's healthcare environments (AACN, 2004).

One issue raised in support of the BSN credential is that nurses collaborate with members of other healthcare professions such as pharmacists, physicians, physical and occupational therapists with higher educational levels (Marjorie, McFarland & Lenihan, 2001). The BSN prepared nurse is most likely the minimum educational level that can be considered as academically proficient to collaborate with these other healthcare professions. The Educational Advancement for RNs Briefing Paper states that advanced education will better enable nurses to practice as full partners on a multidisciplinary team, given the education advancement of a number of other health professions. These include the following with a minimum requirement for entry level practice:

Social workers: a Master's degree;

Physical therapists – a Master's degree in 2002, Doctoral degree required by 2010;

Pharmacists – Pharm D has replaced the Bachelor of Pharmacy degree.

Benner, Surphen, Leonard, and Day (2010), in the recently released Carnegie Foundation for Advancement of Teaching, make the following 6 recommendations to improve nursing education at the program level. These are intended to fulfill the professional promise nursing offers society by “nursing organizations and the service joining nurse educators and students to improve nursing education before graduation and over the course of a nurse's career (p. 215).

1. Come to an agreement about a set of clinically relevant prerequisites.
2. Require the BSN for entry into practice.
3. Develop local articulation programs to ensure a smooth, timely transition from the ADN to the BSN. This recommendation urges local and regional consortiums on the order of the Oregon Consortium for nursing education to create a seamless transition from the ADN program to the BSN - and beyond.
4. Develop more ADN to MSN programs. Orsolini-Hain (2008) found that few ADN students felt motivated to return to school for a baccalaureate degree because the degree would not significantly influence job capacities and functions. The ADN to MSN programs would give ADNs realistic incentives to return to school for better employment opportunities and salaries. Additional benefit would be an increase in the applicant pool for Doctoral study and enlargement of the faculty pipeline.
5. Recruit a more diverse faculty and student body. African Americans, Hispanic Americans, Asian Americans and American Indians are underrepresented in nursing. Underrepresented minorities are more likely to pursue the baccalaureate or higher degree in nursing (AACN, 2008) which would lead to a more diverse nursing faculty.
6. Provide more financial aid, whether from public or private sources for students, at all levels.

Benner et al. (2010) continued to give up to 26 recommendations, with the 25th and 26th addressing national oversight. They propose that the National Council for State Boards of Nursing develop a new set of student performance assessments with three national examinations of performance:

1. Beginning of the last year of nursing school;
2. During the time of the NCLEX-RN® examination, and
3. End of one-year post licensure residency.

These examinations could be given in simulation laboratories. The last recommendation, number 26, is for the two agencies for accreditation, the National League for Nursing (NLN) and the AACN, come together to collaborate as all levels of education are addressed.

Another recent report, completed in 2010, is the Committee on the Robert Wood Johnson Foundation (RWJF) Initiative on the Future of Nursing at the Institute of Medicine (IOM). In the course of the RWJF/IOM Initiative deliberations, in 2010, the committee formulated four key messages for the transformation of the nursing profession. Two messages from this IOM Report that closely parallel the work of the Pennsylvania Coalition for the Advancement of Nursing Education (PCANE) are:

1. Nurses should practice to the full extent of their education and training.
2. Nurses should achieve higher education and training through an improved education system that promotes seamless academic progression. (IOM, 2010).

The Future of Nursing Report (IOM, 2010) proposes that the first step in actualizing these recommendations is for a greater number of nurses to enter the workforce with a baccalaureate degree or progress to this degree earlier in their career. Similar to PCANE, this Report also recognizes the many entry points of nursing. The Future of Nursing Recommendation is that nursing education needs pathways for seamless transition to higher degree programs—from licensed practical nurse (LPN)/licensed vocational nurse (LVN) degrees,

to the associate's degree in nursing (ADN) and bachelor's of science in nursing (BSN), to master's of science in nursing (MSN), and to the PhD and doctor of nursing (DNP).

The IOM Report specifically recommends increasing the proportion of nurses with a baccalaureate degree to 80 percent by 2020. To actualize this recommendation, the Report recommends that the Commission on Collegiate Nursing Education work in collaboration with the National League for Nursing Accrediting Commission requiring all nursing schools to offer defined academic pathways, beyond articulation agreements, that promote seamless access for nurses to higher levels of education (2010).

The IOM Report also recommends healthcare organizations to encourage associate degree and diploma nurses to enter baccalaureate nursing programs within 5 years of graduation by offering tuition reimbursement, creating a culture that fosters continuing education, and providing salary differentials and promotions. Private and public funders should collaborate to expand baccalaureate programs to enroll more students by offering scholarships and loan forgiveness, hiring more faculty, expanding clinical instruction through new clinical partnerships, and using technology to augment instruction (2010).

It also recommends doubling the number of nurses with a doctorate by 2020. To actualize this, the Report recommends that the Commission of Collegiate Nursing Education and the National League for Nursing Accrediting Commission monitor the progress of each accredited nursing school to ensure that at least 10 percent of all baccalaureate graduates matriculate into a master's or doctoral program within 5 years of graduation (2010).

Lastly, the RWJF Initiative's mission is to ensure nurses engage in lifelong learning. This lifelong learning recommendation for all nurses is parallel to PCANE's mission. The Future of Nursing Report recommends that this is actualized by the Commission of Collegiate Nursing Education and the National League for Nursing Accrediting Commission. It is proposed that these commissions together require all nursing students to demonstrate a comprehensive set of clinical performance competencies that encompass the knowledge and skills needed to provide care across settings and the lifespan (2010).

A number of recent studies suggest that increased education supports better outcomes for patients. A study by Friese, Lake, et al., (2008) examined the effect of nursing practice environments on outcomes for cancer patients undergoing surgery. The study found that baccalaureate prepared nurses were associated with lower mortality and failure-to-rescue rates. Results of a 2007 study which encompassed over 46,000 patients in Toronto hospitals suggests that hospitals with higher proportions of baccalaureate-prepared nurses tended to have lower 30-day mortality rates; with a 10% increase in the proportion of baccalaureate prepared nurses associated with 9 fewer deaths for every 1,000 discharged patients. (Tourangeau, et.al, 2007). Aiken, et al., (2003; 2007) in two separate studies demonstrated a link between nurse educational level and patient outcomes. The results of her 2007 study suggest that every 10% increase in the proportion of Bachelor prepared nurses on the hospital staff was associated with a 4% decrease in the patient risk of death. In 2003 Aiken reported that a 10% increase in the proportion of nurses holding bachelor's degrees decreased the risk of patient death and failure to rescue by 5%. In a similarly designed study, Estabrooks et. al., (2005) examined over 18,000 patient outcomes

in 49 hospitals and concluded that baccalaureate prepared nurses have a positive impact on mortality rates.

In December 2009, the result of a multiyear, comparative study of professional nursing education was released from the Carnegie Foundation for the Advancement of Teaching. The new study, titled *Educating Nurses: A Call for Radical Transformation*, recommends increasing the entry level of education for nurses to a bachelor's degree, with a mandate for all RNs to earn a master's degree within ten years of initial licensure; the development of articulation programs to ensure smooth transition from ADN to BSN; and the development of ADN to MSN programs (Benner et.al. 2009). The study concluded that many new nurses are "undereducated" to meet practice demands across settings

Report of the Data

Pennsylvania Registered Nurse Workforce Data

The aging populace, coupled with the increasing average age of healthcare workers and the nursing/allied health shortage creates the perfect storm for the healthcare workforce throughout the next decade. According to the Pennsylvania Center for Health Careers (2009) the RN and LPN nursing shortage continues to present workforce challenges through 2014. The 2014 low estimate shortage numbers are predicted to be 5,000 and 8,300 respectively (See charts below for details).

The Pennsylvania Registered Nurse Workforce In Health Care
Updated - New DOH Health Care Workforce Survey Data & Regional Projections

High Estimate RN Model (Table A)								
REGISTERED NURSE SUPPLY (labor force)								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	129,400	131,700	134,100	136,400	138,300	139,700	140,700	141,300
Unemployed Seeking Emp in HC in PA (B)	3,600	3,600	3,600	3,600	3,600	3,500	3,400	3,300
New Entries (C)	4,700	5,200	5,500	5,500	5,500	5,500	5,500	5,500
Replacements (D) 1.86% to 4.28%	2,400	2,800	3,200	3,600	4,100	4,500	4,900	5,300
NET SUPPLY = A+B+C-D	135,300	137,700	140,000	141,900	143,300	144,200	144,700	144,800
REGISTERED NURSE DEMAND (projected employment)								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	129,400	132,000	134,600	137,200	139,800	142,400	145,000	147,600
Unfilled at 4.9 (B)	5,600	5,700	5,800	5,900	6,000	6,100	6,200	6,300
Growth (C)	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
NET DEMAND (ND) = A + B + C	137,600	140,300	143,000	145,700	148,400	151,100	153,800	156,500
SHORTAGE (NS - ND)	-2,300	-2,600	-3,000	-3,800	-5,100	-6,900	-9,100	-11,700
PROJECTED SHORTAGE/ SURPLUS	-2%	-2%	-2%	-3%	-3%	-5%	-6%	-7%

Low Estimate RN Model (Table B)								
REGISTERED NURSE SUPPLY (labor force)								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	129,400	132,200	135,200	138,200	140,800	143,100	145,000	146,600
Unemployed Seeking Emp in HC in PA (B)	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600
New Entries (C)	4,700	5,200	5,500	5,500	5,500	5,500	5,500	5,500
Replacements (D) 1.46% to 3.30%	1,900	2,200	2,500	2,900	3,200	3,600	3,900	4,200
NET SUPPLY = A+B+C-D	135,800	138,800	141,800	144,400	146,700	148,600	150,200	151,500
REGISTERED NURSE DEMAND (projected employment)								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	129,400	132,000	134,600	137,200	139,800	142,400	145,000	147,600
Unfilled at 4.9 (B)	5,600	5,700	5,800	5,900	6,000	6,100	6,200	6,300
Growth (C)	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
NET DEMAND (ND) = A + B + C	137,600	140,300	143,000	145,700	148,400	151,100	153,800	156,500
SHORTAGE (NS - ND)	-1,800	-1,500	-1,200	-1,300	-1,700	-2,500	-3,600	-5,000
PROJECTED SHORTAGE/ SURPLUS	-1%	-1%	-1%	-1%	-1%	-2%	-2%	-3%

The Pennsylvania Licensed Practical Nurse Workforce In Health Care

Updated - New DOH Health Care Workforce Survey Data & Regional Projections

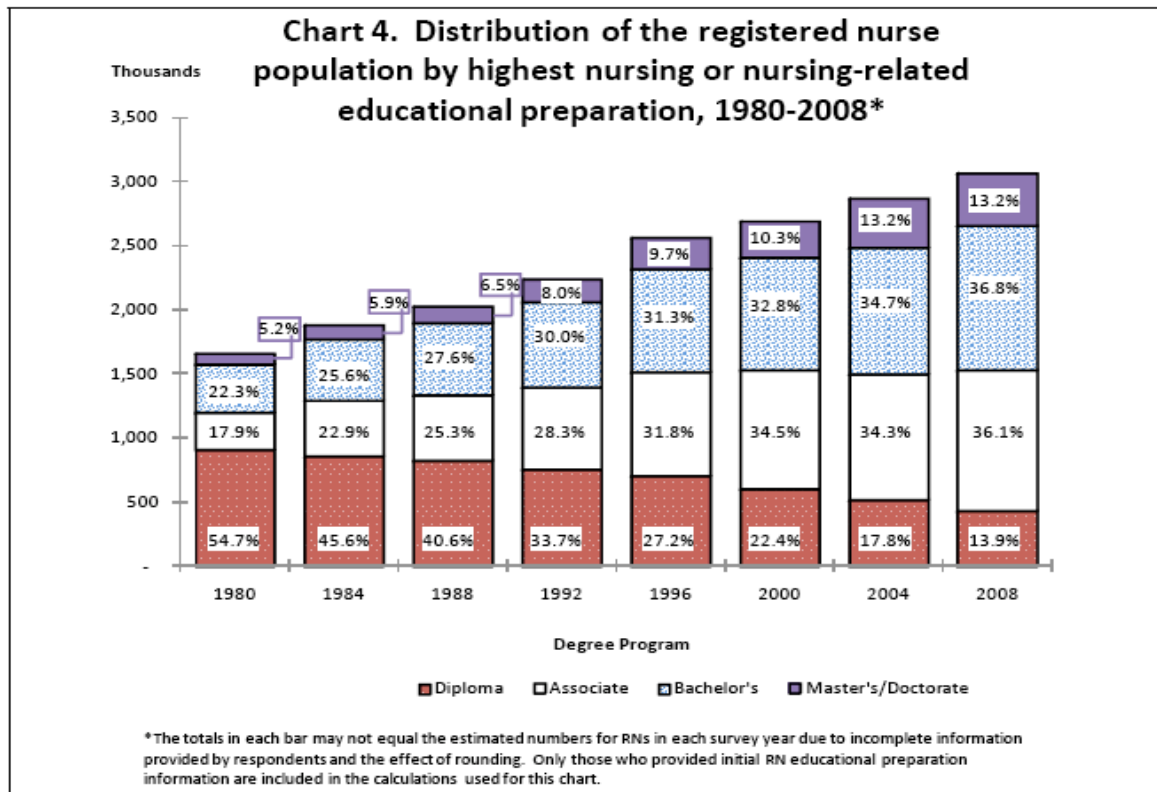
High Estimate LPN Model (Table A)								
LICENSED PRACTICAL NURSE SUPPLY								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	37,600	36,400	35,400	34,500	33,600	32,700	31,800	30,900
Unemployed Seeking Emp in HC in PA (B)	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100
New Entries (C)	1,700	1,900	2,000	2,000	2,000	2,000	2,000	2,000
Replacements (D) 1.67% to 3.95% + Career Develop.	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900
NET SUPPLY = A+B+C-D	38,200	37,100	36,100	35,100	34,100	33,100	32,100	31,100
LICENSED PRACTICAL NURSE DEMAND (projected employment)								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	37,600	38,000	38,400	38,800	39,200	39,600	40,000	40,400
Unfilled at 6.7 (B)	2,400	2,400	2,400	2,500	2,500	2,500	2,500	2,600
Growth (C)	400	400	400	400	400	400	400	400
NET DEMAND (ND) = A + B + C	40,400	40,800	41,200	41,700	42,100	42,500	42,900	43,400
SHORTAGE (NS - ND)	-2,200	-3,700	-5,100	-6,600	-8,000	-9,400	-10,800	-12,300
PROJECTED SHORTAGE	-5%	-9%	-12%	-16%	-19%	-22%	-25%	-28%

Low Estimate LPN Model (Table B)								
LICENSED PRACTICAL NURSE SUPPLY								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	37,600	37,000	36,600	36,300	35,900	35,500	35,000	34,500
Unemployed Seeking Emp in HC in PA (B)	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100
New Entries (C)	1,700	1,900	2,000	2,000	2,000	2,000	2,000	2,000
Replacements (D) 1.35% to 3.09% + Career Develop.	2,300	2,300	2,300	2,400	2,400	2,500	2,500	2,500
NET SUPPLY = A+B+C-D	38,800	38,300	37,900	37,400	36,900	36,300	35,700	35,100
LICENSED PRACTICAL NURSE DEMAND (projected employment)								
Variable	2007	2008	2009	2010	2011	2012	2013	2014
Employment In Health Care in PA (A)	37,600	38,000	38,400	38,800	39,200	39,600	40,000	40,400
Unfilled at 6.7 (B)	2,400	2,400	2,400	2,500	2,500	2,500	2,500	2,600
Growth (C)	400	400	400	400	400	400	400	400
NET DEMAND (ND) = A + B + C	40,400	40,800	41,200	41,700	42,100	42,500	42,900	43,400
SHORTAGE (NS - ND)	-1,600	-2,500	-3,300	-4,300	-5,200	-6,200	-7,200	-8,300
PROJECTED SHORTAGE	-4%	-6%	-8%	-10%	-12%	-15%	-17%	-19%

The healthcare workforce crisis and recent Healthcare Reform Legislation propels all administrators, front line staff and interested stakeholders to re-evaluate the return on investment of a multitude of implementations aimed at addressing the actual or impending workforce crisis. Human capital is a major source of a healthcare institution's budget, despite the type of patient care delivery model. With the impending retirements of massive numbers of healthcare workers from the baby boomer generation, knowledge transfer and the building of human capital is a critical concept. Seamless career pathways are a key to a strong nursing workforce of the future.

The U.S. has more licensed registered nurses (RNs) than ever (an estimated 3,063,163 – a 5.3 percent increase since the last Health Resources and Services Administration (HRSA) survey in 2004). The HRSA chart below depicts 2008 initial findings from the HRSA survey of the distribution of the registered nurse population by highest nursing or nursing related educational preparation from 1980 – 2008. The trend indicates a steady increase in associate and baccalaureate education mirrored by a decrease in diploma education from a national perspective. Overall this trend is similar in Pennsylvania with the exception of the Diploma

prepared nurse. Pennsylvania continues to educate nurses at the Diploma level outpacing the national numbers, often in conjunction with a college partner. According to the *Special Report on the Characteristics of the Registered Nurse Population in Pennsylvania* conducted by the Pennsylvania Department of Health (2006), 31.3% of nurses working in healthcare in PA hold a Bachelor's degree in nursing, 25.9% an Associate's degree, and 24.8% a Diploma.

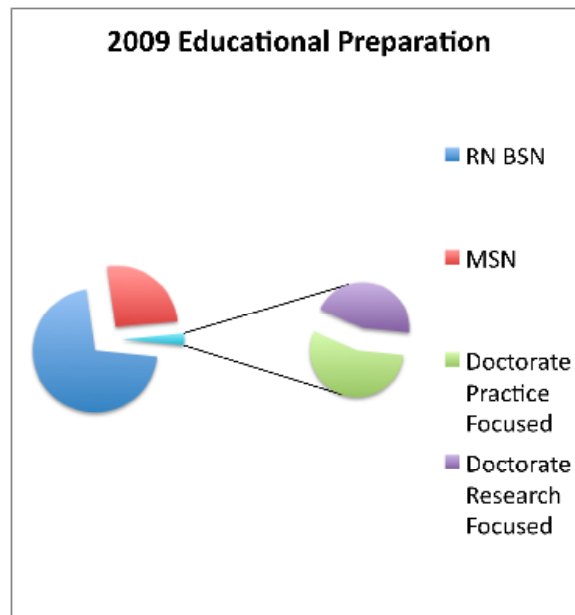


Although the number of RNs with master's or doctorate degrees rose to indicate an overall increase in the nursing workforce, the percentage of the whole remains constant. This is a concern, especially in light of Healthcare Reform and the need for advanced practice nurses. In

addition, the need for graduate prepared nurses is further complicated related to the national nursing faculty shortage.

The National Council of State Boards of Nursing (NCSBN, 2007), as reported in the NCLEX Results by Type of Candidates, indicate there were 69,890 ADN candidates for RN licensure in 2007, 45,781 BSN candidates, and 3,688 Diploma candidates. The number of candidates taking the NCLEX-RN exam has increased by over 38% since 2003 with each educational level producing more graduates. In 2003, the number of Diploma candidates was 2,565, ADN candidates numbered 47,423, and BSN candidates numbered 26,630 (NCSBN, 2003). Though both ADN and BSN programs have made substantial gains in numbers of graduates, the ADN graduates still represent the largest pool of new Registered Nurses. According to the National Center for Health Workforce Analysis (2002) Associate degree graduates accounted for 60% of all new nurses.

2009 American Association of Colleges of Nursing (AACN) survey results confirm the need for career pathways leading toward the BSN and graduate degrees.



Diversity of the nursing workforce is impacted by level of educational preparation. According to the National League for Nursing (NLN, 2009) African American enrollment in LPN programs is 21.8%, Diploma programs - 17.8%, ADN - 13.9%, BSN - 13.6%, Master's - 12.7 and Doctorate - 11.3%. This data supports the need for career pathways to contribute to the diversification of the nursing workforce.

In 2008 and 2009, PCANE collected data to identify currently enrolled nursing students' and employed nurses' interest in career pathways and other related concepts. The data supports the need for low cost nursing career pathways.

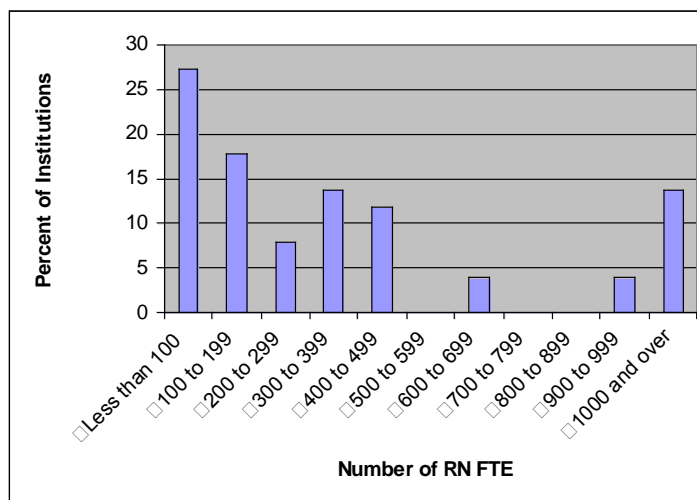
Healthcare Institution Nursing Employee Related Data

Pennsylvania hospitals employ approximately 73,000 Registered Nurses (RNs), representing approximately 61 percent of the state's total Registered Nurse population currently employed in healthcare in the Commonwealth (Pennsylvania Department of Health, 2008). In 2009, PCANE conducted a survey of hospitals in the Commonwealth of Pennsylvania to gather data related to educational advancement. The Pennsylvania Organization of Nurse Leaders (PONL) provided a list of acute care hospitals and the associated Chief Nursing Officer within the Commonwealth. This list was utilized for the survey distribution. Fifty one surveys were returned which included 47 Hospital/Medical Centers, 2 LTC and 2 institutions who described themselves as "hospital medical center, skilled nursing facility, and long term care facility". The purpose of the survey was to gather information regarding the number of RNs in the Commonwealth in acute care settings, the highest degree earned, and the support provided from acute care institutions for RN to BSN education.

Average Number of RN Full Time Equivalent (FTE)

The number of Registered Nurse FTEs within the surveyed facilities ranged from 14 to 1900 with a mean of 447 and a median of 238.5 RN FTE. The total FTE of RNs in all 51 institutions was 22,812.53.

Number of RN FTE	Number/Percent Respondents in this Category
Less than 100	14 (27.4percent)
100 to 199	9 (17.6percent)
200 to 299	4 (7.8percent)
300 to 399	7 (13.8percent)
400 to 499	6 (11.8percent)
500 to 599	0 (0percent)
600 to 699	2 (3.9percent)
700 to 799	0 (0percent)
800 to 899	0 (0percent)
900 to 999	2 (3.9percent)
1000 and over	7 (13.8percent)

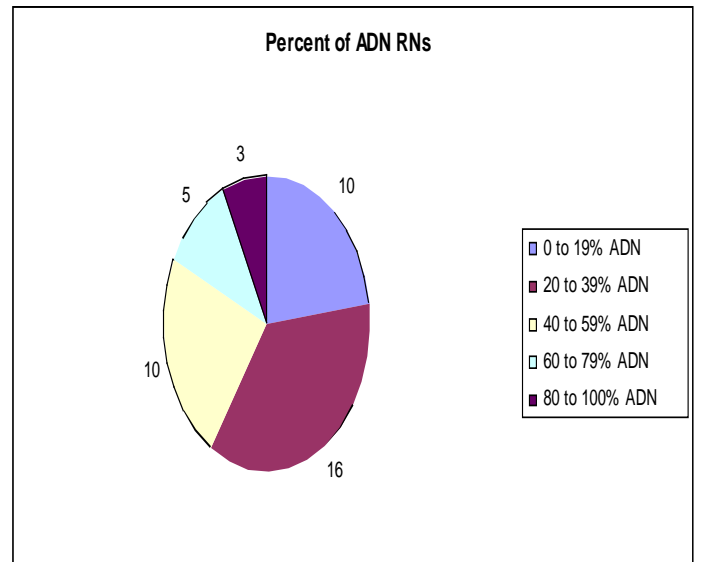


Highest Degree Earned

The percent of RNs within a single organization whose highest nursing degree is an Associate's Degree ranged from 2 percent to 85 percent. The percent of RNs within a single organization whose highest nursing degree is a hospital-based diploma ranged from 2 percent to 88 percent. The percent of RNs within a single organization whose highest nursing degree is a Bachelor of Science Degree in Nursing ranged from 1 percent to 74 percent with both the mean and median of approximately 30 percent. The percent of RNs within a single organization whose highest nursing degree is a Master's Degree in Nursing ranged from 0 percent to 14 percent. The percent of RNs with a Doctoral Degree ranged from 0 percent to 2 percent.

Percent of ADN Staff

Percent ADN staff	#
0 percent to 19 percent	10
20 percent to 39 percent	16
40 percent to 59 percent	10
60 percent to 79 percent	5
80 percent to 100 percent	3
Unknown/no answer	<u>7</u>
Total	51



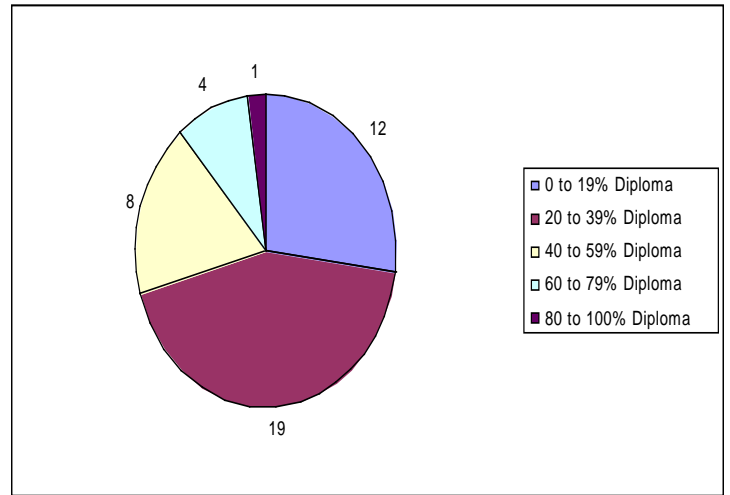
Range = 2 percent to 85 percent

Mean = 36 percent

Median = 34 percent

Diploma RN Staff

Percent Diploma staff	#
0 to 19 percent	12
20 to 39 percent	19
40 to 59 percent	8
60 to 79 percent	4
80 to 100 percent	1
Unknown/no answer	<u>7</u>
Total	51



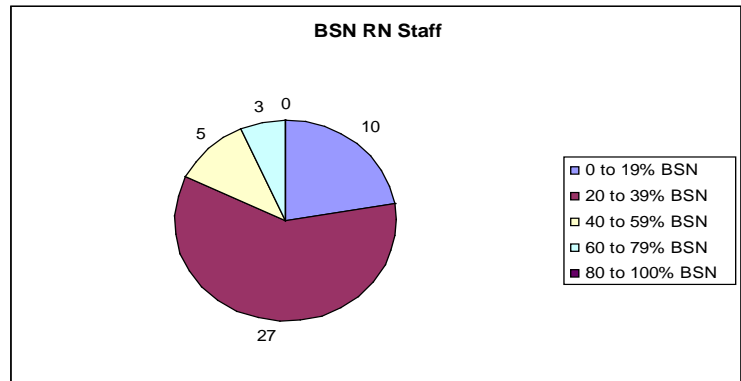
Range = 2 to 88 percent

Mean = 30.6 percent

Median = 26.5 Percent

BSN Staffing

Percent BSN staff	#
0 to 19 percent	10
20 to 39 percent	27
40 to 59 percent	5
60 to 79 percent	3
80 to 100 percent	0
Unknown/no answer	<u>6</u>



Total 51

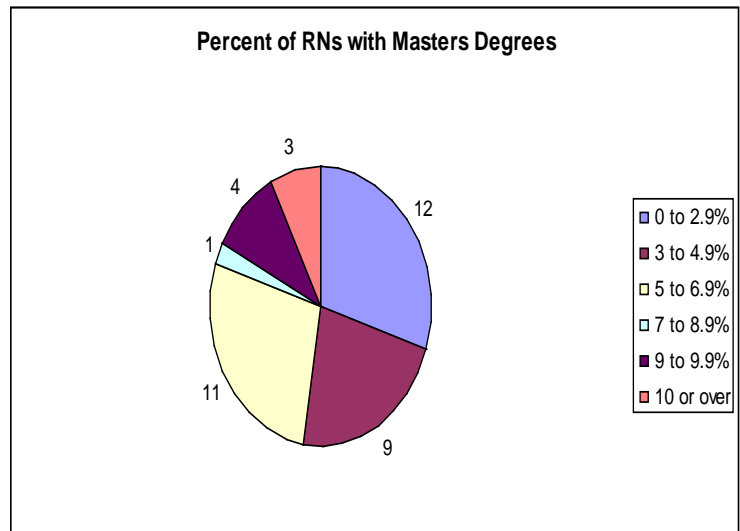
Range = 1 percent to 74 percent

Mean = 29.4 percent

Median = 30 percent

Percent of RNs with Masters Degrees

Percent Masters	#
0 to 2.9 percent	12
3 to 4.9 percent	9
5 to 6.9 percent	11
7 to 8.9 percent	1
9 to 9.9 percent	4
10 or over	3
Unknown/no answer	<u>11</u>



Total 51

Range = 0 to 14

Mean = 4.7

Median = 4.2

Percent of RNs with Doctoral Degree

Zero	24
0 to 1 percent	2
1 percent	4
2 percent	1
Unknown or no answer	<u>20</u>
Total	51

Range = Zero to 2 percent

Mean = 0.2 percent

Median = Zero percent

Availability of On-site RN-BSN Educational Program

Respondents were asked if an RN - BSN completion program was offered to their RN staff on-site at the institution. Nineteen institutions (37.3 percent) indicated that on-site courses were available. Thirty-two institutions (62.75 percent) indicated that on-site RN-BSN courses were not available. In addition, 7 (13.7 percent) of the surveyed institutions offered on-site Master's of Science Degree programs in Nursing (MSN).

Tuition Reimbursement for RN-BSN Continuing Education

The overwhelming majority (92.2 percent) of institutions surveyed provide some form of educational reimbursement for RNs who desire to pursue advanced education. Only four of the fifty-one surveyed institutions indicated that they did not provide any type of educational/tuition incentive. A smaller number of hospitals (11 or 21.6 percent) indicated that the tuition incentive was available as a prepaid benefit. The majority of hospitals (78.4 percent) required the RN to attend the class, pay “out of pocket” and then request reimbursement after successful completion of the course. The data related to prepaid tuition for nursing management produced similar results with only nine of the responding institutions (17.6 percent) indicating that tuition reimbursement is available as a prepaid benefit.

The responses regarding the amount of educational reimbursement available were difficult to analyze. Although the question was intended to solicit responses regarding annual tuition benefit, it is unclear from some responses if the data reflects per semester, annual, or per person maximum reimbursement.

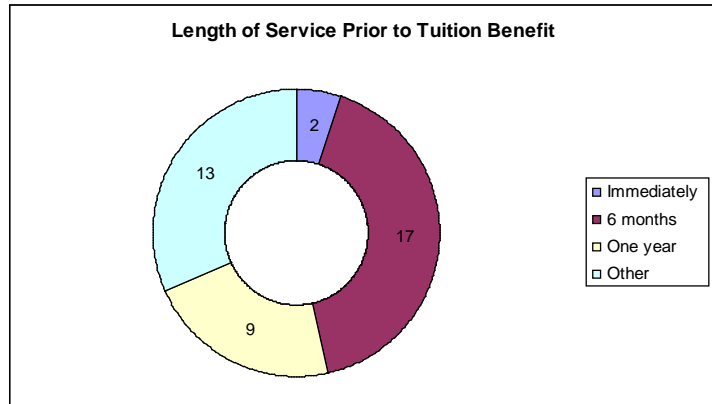
Amount of Educational Tuition Reimbursement

FULL TIME STAFF	
Zero	(4)
\$75	(1)
\$300 to \$425	(1)
\$600 to \$750	(2)
\$1000 to \$1500	(1)
\$1600 to \$1750	(1)
\$2000 to \$2500	(14)
\$3000 to \$3500	(10)
\$4000 to \$4500	(8)
\$5000	(3)
\$6000	(2)
No answer (or incomplete data)	(11)

PART-TIME STAFF	
Zero	(6)
\$75	(1)
\$300 to \$425	(2)
\$600 to \$750	(2)
\$1000 to \$1500	(8)
\$1600 to \$1750	(4)
\$2000 to \$2500	(12)
\$3000 to \$3500	(2)
\$4000 to \$4500	(1)
\$5000	(1)
\$6000	(1)
No answer (or incomplete data)	(11)

The data regarding the length of service required prior to receiving tuition reimbursement varied from immediate to one year, with a six month wait as the median wait time prior to an RN's eligibility to receive a the tuition reimbursement benefit.

Immediately	2
6 months	17
One year	9
Other	13
3 months –	6
4 months –	1
No comment -	6

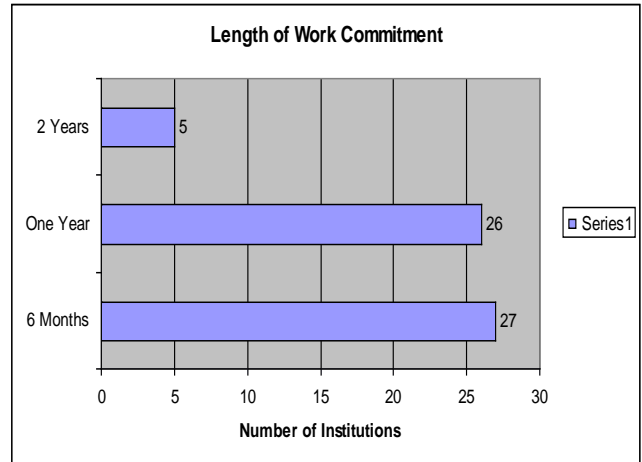


Registered Nurses receiving tuition reimbursement are often required to remain employed at the institution for a specified period of time following the receipt of tuition reimbursement. The respondents indicated that 35 out of 51 (68.6 percent) of the institutions required a time commitment in return for receiving tuition reimbursement. Of those institutions, the time commitment required varied from 6 months to 2 years with the overwhelming majority (91.4 percent) of responses falling at or below a one year commitment. Some respondents answered this question more than once indicting the time commitment may be different dependent on the setting or circumstances.

Length of Work Commitment

6 Months	27
One Year	26
2 Years	5

Pay Scale Adjustment for Educational Level



The purpose of the final section of the survey was to gather information regarding the incidence of differences in pay structure for Registered Nurses based on highest level of education achieved. Only 8 of the 51 respondents (15.7 percent) indicated that there was a structure in place to award a differential in pay for nurses based on achieved educational level. However, 52.9 percent (27) of the responding institutions indicated that a clinical ladder structure was in place for Registered Nurses, and included credentials earned as a part of the clinical ladder advancement process.

Approximately 50% of Registered Nurses in the Commonwealth of Pennsylvania have an Associate Degree or Diploma as their highest degree earned. (PA Department of Health, 2008). The percent of Registered Nurses with an earned Bachelor's Degree or higher, working within a specific acute care institution in the Commonwealth of Pennsylvania, varies widely throughout the state. The overwhelming majority (92.2 percent) of institutions in the Commonwealth provides some form of educational tuition reimbursement for RNs who desire to pursue advanced education, but the amount of reimbursement and the policies regarding the reimbursement process varies significantly. Only 15.7 percent of the acute care institutions in the Commonwealth provide a structure to award a difference in compensation for nurses based on achieved educational level. This information is critical to analyzing the current RN population

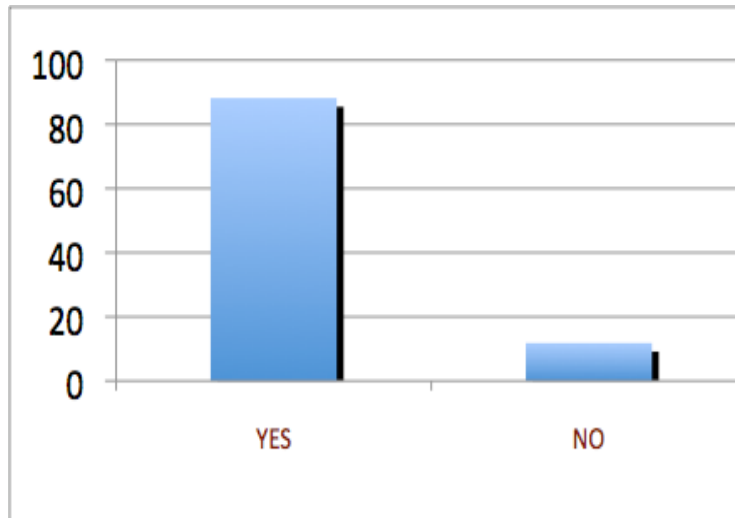
and implementing strategies to increase the number of BSN level graduates working within the Commonwealth of Pennsylvania.

Practical Nursing Student Data

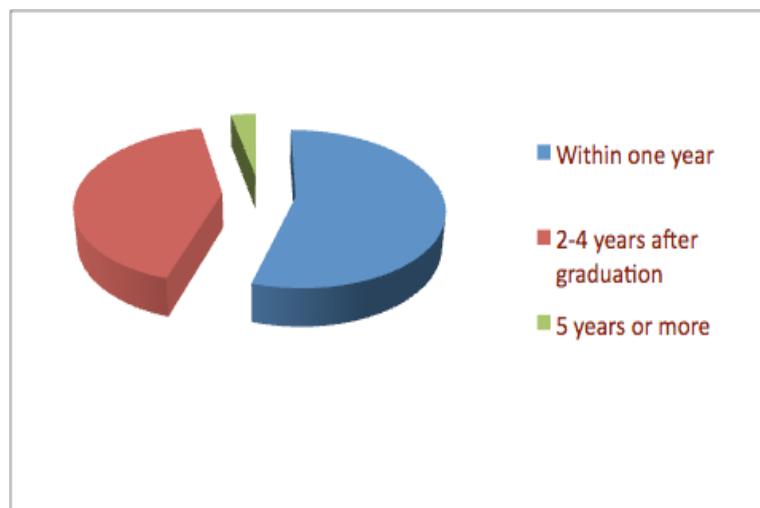
A survey of Pennsylvania Practical Nursing schools was conducted by the Pennsylvania Association of Practical Nursing Programs (PAPNA) in the Winter of 2008 to determine the interest of PN students in continuing their education. A total of 678 surveys were sent via Email with a response rate of 376. This number represented various PN programs throughout the Commonwealth located in rural and urban areas and representing different program types (Vocational-technical schools and community college settings). 88.2% indicated their interest in attending an RN program after completion of their LPN program. In this cohort, 54.7% indicated that they would enroll in a RN program within one year. Interestingly, 46% of all students interested in pursuing nursing education reported being undecided regarding the type of RN program. Of those reporting a choice the variation was minimal between ADN, BSN or Diploma programs. However, if money was available to support their education a resounding 40.5% indicated that they would pursue a MSN, followed by 32.3% indicating that they would pursue a BSN. Diploma and ADN dropped significantly to 2.7% and 9.7% respectively. This data provides implications regarding the need for seamless transition pathways from LPN to all RN program types. The reality of money must be considered when examining the availability of programs. In addition, career pathways from ASN and BSN programs to MSN and Doctoral level courses should be identified for nurses and students should be mentored as to choices available. The fact that the PN students were largely undecided regarding their choice of RN program type speaks volumes regarding the lack of clarity relevant to this issue.

Data in charts below is listed in percentage.

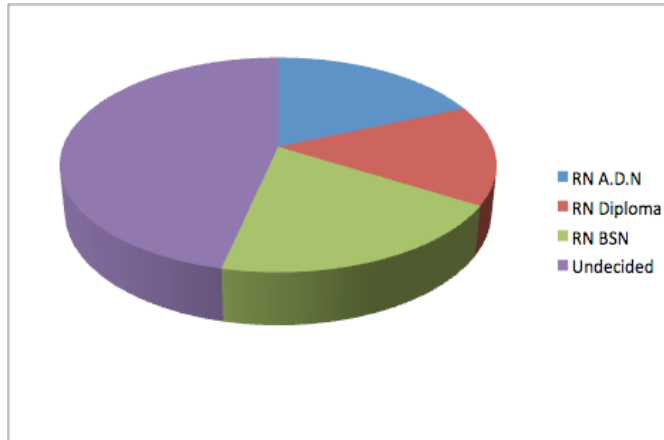
Do you plan on attending an RN Program after you graduate from this program?



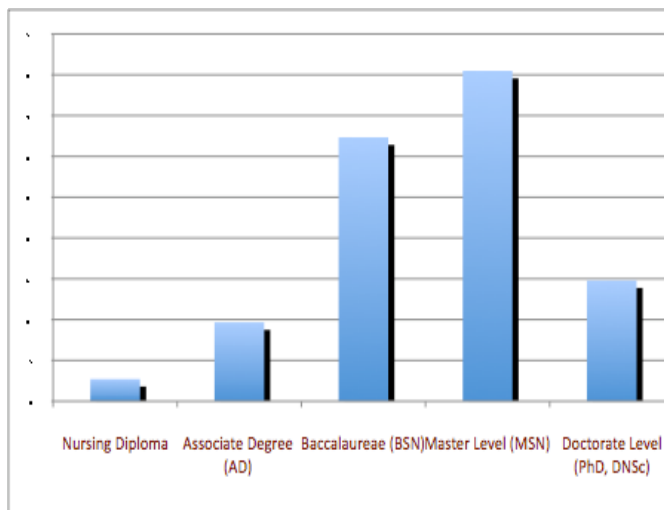
If you answered yes, when would you plan on enrolling in an RN Program?



What type of RN Program will you be most likely to enroll in?



If money were available to support your education, what would be the highest level of nursing education you would pursue?



According to the NCSBN LPN/VN Practice Analysis (2009), approximately 25.6 % of responders reported enrollment in an RN education program

80.5% were in associate degree programs

13.7% in baccalaureate programs

4.9% in diploma programs

.9% other

In addition, 19.2% reported that they had applied to such a program, but were not currently enrolled.

Associate Degree and Diploma Nursing Student Data

A survey of 4,390 Pennsylvania Associate degree and Diploma nursing students (Maneval & Tetter, 2010) found that the majority of nursing students in Pennsylvania are planning on pursuing a bachelor's degree in nursing (86.3%) and most hope to be enrolled in a BSN program within 4 years of graduation (94.8%). The majority of students, 78.9%, indicated they would still enroll in their current program even if they were mandated to complete a Bachelor's degree in nursing (BSN) within 10 years; When asked if ten years was a reasonable amount of time to complete a BSN, 79.4 % agreed it is. If money were not an obstacle, 95.8% of participants indicated they would pursue a BSN or higher. The results of this survey suggest that the vast majority of Associate degree and Diploma nursing students value and hope to pursue higher education in nursing.

Examples for Educational Programs

The goal of this white paper is to encourage, promote, and support nursing educational programs at all levels (LPN, ADN, Diploma, BSN, MSN, and Doctoral) across the state to examine their curricula and collaborate with colleagues in other organizations to ensure that articulation to the next level of advancement can occur without undue difficulty, unnecessary repetition, and in a financially reasonable manner. The goal is to create seamless, cost effective career pathways encouraging nurses to achieve their maximum educational potential, while respecting multiple entry and exit points through the continuum. At this point in time, there does not seem to be one model that will accommodate all the educational programs in the Commonwealth such as has been accomplished in states such as Oregon and Maryland. Therefore, this paper will attempt to offer principles, guidelines and examples that will assist schools at all levels of nursing education.

LPN to RN

In the Commonwealth of Pennsylvania, 25.6% of Licensed Practical Nurses (LPN) goes on to pursue licensure as a registered nurse. This will continue to be an important source of registered nurses for the Commonwealth. The majority of LPNs go on to study in Associate Degree programs particularly in the community college system with many granting advanced standing. However, examples of advanced standing in BSN programs also exist. Both Associate and Bachelor degree programs are encouraged to provide support for this very important source of future RNs. Advanced standing can be granted by articulation agreements between two schools that recognize the level of education in each program and can award credit for completed courses. Some articulation agreements also include a joint admission policy that automatically

admit successful graduates of a particular program with no further admissions process except for registration for the next level program. In other models, the RN program provides specific transition courses that allow the incoming student to advance through the program more quickly.

LPN to RN Articulation

An example of a successful articulation program at this level is that between the Center for Arts and Technology-Brandywine Campus (CAT-B) LPN Program and the Delaware County Community College. LPN graduates from the CAT-B who apply to Delaware County Community College's Associate in Applied Science Degree for Nursing are eligible for advanced standing in the nursing program. The Advanced Placed LPNs receive credit for first year of the program with 8 nursing credits for the first semester and 10 nursing credits for the second semester. Therefore they enter the program with 18 of the 41 required nursing credits completed with their successful completion of the LPN program and their LPN license.

To obtain this advanced standing, the entering students must meet the admission criteria for the nursing program which includes taking the Nurse Entrance Test and achieving the required scores. They must have a current LPN license with a minimum of 1000 hours of work experience.

LPN to BSN Articulation

York College of PA accepts students who are graduates of NLNAC accredited LPN programs. The college awards the LPNs credit for the sophomore year nursing courses which include: NUR 210/211 Basic Principles, NUR 202 Nutrition, NUR 201 Human Development and Health Care. The LPNs then take a two credit transition course entitled: NUR 220 Concepts in

Professional Nursing for the Licensed Practical Nurse. This course presents concepts and theories needed for the LPN to progress to higher level nursing courses. LPNs are also required to take a course in Health Assessment. From this entry point the LPN transitions into other classes with generic BSN students. This awards the LPN advanced standing and an easy transition into BSN courses.

RN to BSN

Presently, the Commonwealth of Pennsylvania has 19 NLN accredited nursing diploma programs making Pennsylvania unique in being the state with the most hospital-based programs, with New Jersey at 10, Virginia at 6, Ohio at 4, and one each in Illinois, New York, Missouri, Massachusetts, and Rhode Island. Typically, these programs today require a student to complete a year of college, receive approximately one year credit of the nursing program equivalency, and then complete via an accelerated cohort model of upper division nursing courses (e.g., statistics and research, leadership and management, public health) as well as outstanding liberal arts courses. Many of these courses are done in cohort style online and onsite at the hospital or nearby at a regional college or university. The vast majority of these programs are designed as accelerated 5-7 week online and/or onsite courses.

RN to BSN Articulation

Articulation agreements are important to enhance access to baccalaureate level nursing education. These agreements support education mobility and facilitate the seamless transfer of academic credit between associate degree (ADN), diploma, and baccalaureate (BSN) nursing programs. Pennsylvania is referenced in the American Association of Colleges of Nursing Fact

Sheet (2005) as having a statewide articulation agreement which means the state has voluntary articulation plans and models developed through the collaborative effort of nurse educators, regulators, legislators, and other stakeholders to enhance educational mobility for RNs. These agreements are accepted by community colleges and public universities in a given state, though private institutions often choose to participate.

RN to BSN Dual Admission

The Lewistown Hospital School of Nursing (LHSON) has an affiliation agreement with Penn State University. Upon completion of the nursing program and after attaining their RN license, students are awarded 33 transfer credits for nursing courses completed at LHSON when admitted to the RN-BS program at Pennsylvania State University (PSU). Also, during the two year diploma program, the nursing students take 30 required general education credits with Penn State University Learning Center in Lewistown, thus the student is already enrolled in PSU and begins the RN-BS program with a minimum of 63 credits. Different options are provided through PSU that include on-line courses through World Campus or on-site program such as the program offered by the Altoona Campus. This program is set up so that students can enter full time and receive their Lewistown diploma in one and one half years. Students at the Lewistown Hospital School of Nursing also have the option to begin some of the required BSN courses prior to finishing their diploma and this can further shorten the time to obtain the BS degree. Students are encouraged to enter an MS program at the completion of the BS degree.

Dual Admission Agreements

The findings of Maneval, et al. (2010), clearly demonstrated that associate degree and diploma nursing students overwhelmingly (86%) have a desire to pursue the BSN degree of higher following graduation. A barrier that hinders some in goal pursuit is the perceived lack of a direct, seamless path from one level of education to the next. Dual admission agreements, which provide direct admission and matriculation from the associate and diploma level directly into the BSN or graduate level, can help to eliminate this barrier and support educational advancement. While the Oregon Consortium for Nursing Education (OCNE) model is laudable, less comprehensive, individualized models between one associate/diploma programs with a specific four-year institution are being realized in the Commonwealth. One such model is that of Thomas Jefferson University (TJU), a private health science center that provides direct admission to the baccalaureate nursing program at the time of student admittance to the associate or diploma program. Upon successful completion of the associate/diploma program and the NCLEX-RN, the student enters directly into the RN-BSN program. Such a model clearly demonstrates to the student that advancement to the BSN is a value held by the associate/diploma program.

The TJU model also assists in reducing the barrier of cost; a significant barrier to educational advancement identified by students. In this model a student can transfer to the baccalaureate program all but the required 27.5 upper level residency requirement RN-BSN nursing credits. This agreement stipulation enables the student to complete all general education course requirements at an area community college where the cost of tuition is significantly less than that of the private university. Additionally, every course in the 27.5 credits can be completed whether in an on-line or on-line/classroom hybrid combination over two semesters. It

is this flexibility that assists in overcoming the barriers of time and rigid academic schedules that are incongruent with the student's employment and personal commitments.

Other Examples

An example of an effective diploma school articulation model with is those found between Abington Memorial Hospital Dixon School of Nursing and a number of regional colleges and universities. By partnering with many institutions, graduates are afforded a number of unique opportunities, such as: Drexel University (on-line BSN accelerated cohort program, Immaculata College (Onsite BSN cohort accelerated program and onsite MSN), Thomas Jefferson College (Partnership with the Dixon School of Nursing for BSN completion), and La Salle University (BSN Cohort accelerated completion program and onsite MSN cohort courses).

Master's Degrees

The Registered Nurse who wishes to pursue a graduate degree has many options today. There are some program at the master's level that will accept diploma and associate degree graduates directly into graduate programs. Some limit this admission to only those who hold a previous bachelor's degree in another field while others admit any registered nurse regardless of previous education. In addition, schools who offer both BSN and MSN degrees often offer students opportunities for sub-matriculation at the undergraduate level, in order to give them advanced standing when they are enrolled in the graduate program.

RN to MSN

An example of a successful RN to MSN program is at Bloomsburg University. The Department of Nursing at Bloomsburg University developed an RN to MSN program for

registered nurses in the mid-nineties. Based on feedback from the RN population in the region, a large portion of that cohort group indicated that the RN to BSN program was not meeting their personal and professional goals. The program was designed for diploma and associate degree graduates who hold a current RN license and were actively practicing to complete the degree requirements for the baccalaureate degree embedded in the RN to BSN program. The degree granted is the Master of Science in Nursing. The program requirements combine the university expectations of 120 credits at the baccalaureate level and 30 credits at the graduate level. Registered nurses receive 36 advanced nursing placement credits at the undergraduate level via this articulation model and are required to take an undergraduate nursing research course. The remaining undergraduate credits for the 120 are under the category of general education, electives, and graduate course substitutions. Graduate nursing courses also are substituted for undergraduate nursing competencies related to community health and leadership/management in nursing. All of the graduate specialty areas are available in the RN to MSN degree program except the nurse anesthesia option. This option is only for BSN to MSN students. Since the inception of the RN to MSN program the RN to BSN program has had very few candidates. An overwhelming RN population opts for the RN to MSN degree. Employers also support this option due to the advanced competencies at the APN level.

Another variation of an RN to MSN was developed at Gwynedd-Mercy College. The School of Nursing at Gwynedd-Mercy College accepts registered nurses without a BSN into the MSN program. However, they must have a bachelor's degree in another field and complete undergraduate courses in statistics and health assessment. Applicants are required to take the NLN Baccalaureate Achievement Test and score within one standard deviation of the norm referenced mean. If they do not meet this score, they may be counseled to take additional

undergraduate nursing courses. As with the program at Bloomsburg, this type of program meets the needs of the college graduate who has pursued nursing as a mature, experienced learner.

Support for the Advancing Student

In the study conducted by Maneval, et al., (2010), it was demonstrated that the vast majority of nurses who graduated from an associate degree or diploma nursing program hoped to pursue higher education in nursing. Barriers to this goal were identified as finances, work schedules and family and work responsibilities. In order for the goal of educational advancement in the Commonwealth to be achieved, support and encouragement from employers and administrators will be essential. Nurses pursuing advanced education at whatever level they choose must have the support of both peers and administrators. Of course, this begins with financial support which is available in most health care institutions in the Commonwealth. This may also include flexible scheduling, respect for a student's school schedule and recognition by peers and supervisors of their efforts and successes.

Recommendations & Call to Action

The PCANE group believes that the work of the Coalition does not end with this paper. The Coalition seeks the input of all stakeholders in nursing and nursing education throughout the Commonwealth for support of the following recommendations. Action plans and strategies need to be designed to achieve these goals. This is a call to action for the nursing profession to unite in its efforts to advance the education of nurses in the Commonwealth and ultimately improve the health and healthcare of all Pennsylvania citizens.

Build an integrated network of nursing education opportunities through multiple pathways

- Increase the proportion of RN's with a BSN by 10% every 2 years to reach 80% by 2020.
 - Strengthen articulation agreements among LPN, ADN, and BSN program
 - Expand dual admission to ADN/Diploma and BSN programs
 - Encourage development of LPN-BSN programs
 - Increase support for nursing students from multiple pathways
 - Increase financial aid to ADN/Diploma to BSN
 - Increase funding to nursing schools

- Ensure that every LPN program has a formal agreement with at least one RN program by 2015.
- Ensure that every ADN/Diploma program has a formal agreement with at least one BSN program by 2015.
- Increase data collection concerning academic preparation of RNs from state and regulatory agencies.
- Expand capacity of RN-BSN programs in institutions of higher education across the State, both public and private.
- Support innovative use of distance learning and alternative delivery systems.

Expand support for graduate education in nursing

- Ensure that at least 10% of all BSN graduates matriculate into a master's or doctoral program within 5 years of graduation.
- Provide enhanced loans/scholarships for graduate nursing students
- Secure funding for expansion of graduate nursing education programs
- Encourage support by clinical agencies for their staff nurses returning to graduate school
- Create closer collaboration among educators, researchers, and clinicians to promote evidence-based practice and practice-relevant research
- Develop innovative and alternative education systems combining distance learning and classroom experiences
- Identify opportunities to share resources between independent universities

- Increase data collection concerning academic preparation of RNs from state and regulatory agencies.

On May 25, The Summit on Advancing Nursing Education in PA will be held in Harrisburg, PA for the presentation and discussion of this White Paper. The stakeholders who attend this summit will have the opportunity to offer feedback and suggestions for future action plans. This feedback will also be incorporated into this White Paper. Together, we can advance the profession of nursing in the Commonwealth and ultimately improve health care to all Pennsylvania citizens.

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Appendix A

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