

Measuring Student
Capacity and Faculty
Resources in Northeast
Ohio Schools of Nursing

November 2004

Northeast
Ohio
Nursing
Initiative

Preface

The Center for Health Affairs is pleased to present the Nursing School Capacity Report. This report details the results of a survey of the pre-licensure LPN and RN programs from 15 schools of nursing in the Greater Cleveland area. The survey was conducted in October 2003 under the auspices of The Center for Health Affairs (CHA), a metropolitan hospital trade association, through its program, the Northeast Ohio Nursing Initiative (NEONI). NEONI is a collaborative of more than 50 organizations and individuals committed to addressing the nursing workforce shortage.

The survey arose from concerns expressed by the deans and directors of Northeast Ohio schools of nursing about the growing volume of students applying to nursing programs that could not be accepted due to space limitations, coupled with the increasing difficulty of finding appropriately prepared nursing faculty. While the phenomenal interest in nursing as a career is encouraging after years of decline, the ability of schools to quickly increase their resources to meet student demand has created significant challenges not only in our region but across the country.

This report clearly documents the tremendous efforts of nursing schools to increase individual program capacity and outlines the unique characteristics of the nursing education process. It provides validation that Northeast Ohio schools of nursing maintain high rates of graduation that result in nurses who choose to stay in Ohio for employment.

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Introduction

In 2000, professional nurses represented 21 percent of the entire healthcare workforce nationally.¹ The pressure to increase enrollment capacity, accelerate the education process and provide ready-to-work professional nurses represents a daunting challenge for nurse educators. Given the fact that the healthcare industry in Greater Cleveland is a \$5.7 billion dollar industry and ranks 14th out of 317 metropolitan areas based on size and concentration of healthcare business, the importance of sustaining a strong nursing workforce is a critical issue – not only for the delivery of healthcare but as a contributor to the local economy.²

The notion of a nursing workforce shortage in the United States, and even globally, is not new to the general public. As news of a nursing shortage became widespread in 2001 and the national economy faltered, many individuals took a first, or even a second, look at a nursing career. Historically, a professional nursing career has represented, and still does to many individuals, a portable and stable profession. And though challenges still exist, great strides have been made by employers to make the nursing profession more attractive by increasing salaries, offering flexible scheduling and addressing other work-life balance issues.

However, the efforts to influence individuals to go into nursing through national and statewide media campaigns have had a nearly tidal wave effect on schools of nursing and their resources. In 2001, the Cleveland *Plain Dealer* featured an article with the headline “*Nursing schools face acute shortage of students,*” describing the difficulties local nursing schools were experiencing in trying to fill student slots.³ In contrast, just two years later, a 2003 Cleveland *Plain Dealer* headline read “*Nurse crunch hits colleges, too.....Schools forced to turn away students for lack of teachers, space,*” describing a complete trend reversal after years of declining student enrollment.⁴

According to a 2003 national survey by the American Association of Colleges of Nursing (AACN), enrollments in four-year baccalaureate nursing (BSN) programs rose by 16.6 percent, while 11,000 qualified applicants were turned away due to limited school capacity. The factors contributing to limited capacity included a lack of faculty, clinical sites and classroom space.⁵ Similarly, the National League for Nursing (NLN), a national organization that promotes quality nursing education, reported preliminary survey results (2003) that enrollments for all types of registered nurse programs increased by 15 percent, bringing the number of admissions to associate degree (ADN) and baccalaureate (BSN) programs to the same levels they were a decade ago.⁶

By 2012, the United States Department of Labor predicts that the demand for registered nurses (RNs) will increase by 623,000 positions, a 27 percent increase from 2002, putting nursing at the top of the list of the 10 occupations with the most projected

growth. This ranking represents the first time the RN occupation was ahead of all other professions in workforce demand. Similarly, the demand for licensed practical nurses (LPNs) will increase by 142,000 positions, an increase of 20 percent. Over the 10-year period of new growth and needed replacements, total national demand will reach more than one million positions for RNs and 295,000 for LPNs.⁷ The Health Resources and Services Administration (HRSA) released a study in 2002 about the projected need for RNs in each of the 50 states. The initial calculation for Ohio created significant controversy since Ohio was actually predicted to have a surplus of nurses in coming years. In response, HRSA recalculated the data using different assumptions such as an increased aging population, a decrease in the number of new (graduating) RNs, and the likelihood that Ohio would have to import nurses from other states to offset demand.⁸ **Table 1** illustrates this information.

This growing need for nurses creates a number of issues for Northeast Ohio healthcare employers and nurse educators. Some of the most basic questions arise such as, “How are nursing schools currently handling demand for nursing education using existing re-

sources?” and, “What resources will they need in the future to meet an ever-increasing demand for professional nurses?”

The focus of this report is to present the findings of the 2003 Northeast Ohio (NE Ohio) nursing school capacity survey. The multitude of issues facing local nursing schools are highlighted, providing a unique perspective on how nurses are educated, the rising demand among individuals to enter a nursing program, and how schools are responding to the demand for more nurses in the community.

Table 1: Ohio Supply and Demand for Nurses: 2000-2020

| Year | FTE SUPPLY | FTE DEMAND | EXCESS OR SHORTAGE () = SHORTAGE | PERCENT OVERAGE OR SHORTAGE |
|------|------------|------------|-----------------------------------|-----------------------------|
| 2000 | 86,912 | 88,957 | (2,045) | -2% |
| 2005 | 89,288 | 94,204 | (4,916) | -5% |
| 2010 | 88,947 | 99,405 | (10,458) | -11% |
| 2015 | 85,541 | 105,593 | (20,052) | -19% |
| 2020 | 79,716 | 111,693 | (31,977) | -29% |

Source: HRSA Registered Nurse Supply, Demand and Shortage Projections for Ohio, 2003



2003 Northeast Ohio Nursing School Capacity Survey

Executive Summary

In 2003, the Northeast Ohio Nursing Initiative (NEONI)⁹ invited 16 schools of nursing¹⁰ across seven counties¹¹ in Northeast Ohio to respond to a comprehensive survey (35 questions) that examined three areas:

- ★ **Student Capacity** (enrollment, attrition and graduation)
- ★ **Program Issues** (program capacity, waiting list and expansion limits)
- ★ **Faculty Resources** (faculty composition, vacancy and availability)

Fifteen schools representing 22 types of pre-licensure programs (registered nurse and practical nurse/licensed practical nurse) responded to the survey. By category, there were eight PN/LPN programs and 14 RN programs including: four Baccalaureate (BSN); four Associate Degree (ADN); three Accelerated –BSN (A-BSN); two diploma; and one Nursing Doctorate (ND).

FINDING 1: Northeast Ohio Nursing Education Programs Have Expanded at a Tremendous Rate

- ★ The number of nursing school applicants to these 22 programs has more than doubled from the 2000-2001 to the 2002-2003 academic year.
- ★ While the percentage of students who met minimum requirements decreased over that time period (68 percent to 55 percent), the overall number of students accepted into a nursing education program increased by 75 percent and the number of students who enrolled (actually started the coursework) increased by 42 percent over the same time period. Overall, nursing schools in Northeast Ohio have maximized existing resources to meet student demand, which has increased by 41 percent over the past three academic years.
- ★ Most nursing school deans and directors agree that the number of qualified candidates has increased in recent years and schools have increased their minimum requirements in response to the larger pool of academically qualified candidates. Therefore, it can be assumed that the overall quality of the students admitted to programs has improved, increasing the likelihood that the students will successfully complete the program and become a part of the nursing workforce.

FINDING 2: There is a Growing Demand for Northeast Ohio Nursing Education Programs to Expand Further

★ In the 2002-2003 academic year, there were 553 qualified nursing school applicants who were denied admission due to a lack of available student slots. This represents 30 percent of all the students who applied and were qualified, meaning they had met the appropriate pre-requisites.

Comparatively speaking, nursing education programs have steadily expanded to accommodate 41 percent more students over the past three academic years. Schools would have had to expand by an additional 30 percent to admit these 553 candidates.

★ Most of the accepted students enrolled (actually began coursework) in 2002-2003 were in a BSN program (38 percent) or an ADN program (37 percent), with 8 percent in a diploma program or an ND program (<2 percent). Of the remaining nursing students, 15 percent were enrolled in a practical nurse (PN/LPN) program.

★ Half of the reporting schools plan on expanding in the near future, but this is limited to 9 percent above current enrollment. An increase of three times that figure is needed to accommodate the number of qualified students who, in the meantime, are most likely placed on program admission waiting lists.

FINDING 3: The Lack of Nursing Faculty and Classroom Space/Clinical Training Sites are the Most Significant Barriers Affecting Program Expansion

★ Average salaries for Ph.D. (\$60,000) and Master of Science in Nursing (M.S./M.S.N.) (\$49,000) – level faculty are well below market when compared to nursing salaries in the service sector (hospitals, home health care agencies, and long-term care organizations). This comparison is based on positions with equivalent education and experience requirements.

★ Seventy percent of nurse educators reported that additional clinical training sites (patient care delivery sites) were needed in all practice areas. However, there was heavier demand on certain days and time periods that might be alleviated if Mondays, weekends, and evening and night rotations were considered. With the exception of Monday, the other times may represent more of a challenge since they are considered non-traditional working hours for nursing faculty. In addition, the ability to accommodate students during times when regular staffing on some patient units may be reduced (evening shift) or the opportunity to provide direct patient care is limited (night shift) may be equally as difficult for the clinical institutions.

FINDING 4: Northeast Ohio Nursing Programs Produce High Quality Nurses Who Work in Ohio

★ Most students who enroll (eight out of 10) graduate with nursing degrees. Students who do not complete a nursing program generally fail to meet

program standards. One of the primary goals of any nursing education program is to prepare students to take the NCLEX® (National Council Licensure Examination) for registered nurse or licensed practical nurse. Each state's board of nursing requires a passing score on the NCLEX® in order to process that individual for state licensure.

- ★ The first-time passage rate for Northeast Ohio students is between 82 and 92 percent for the NCLEX®-RN and LPN tests, which is comparable to national pass rates. This reflects well on the quality of Northeast Ohio nursing education programs.
- ★ Schools report that eight out of 10 nursing school graduates obtain employment and remain in Ohio.

Conclusions

The information from the 2003 Northeast Ohio Nursing School Capacity Survey should be viewed in terms of achievement and alarm. While there is much for local schools to take pride in – quality programming that produces a large number of licensed nurses and their perseverance to expand programs at a time of shrinking state education funds – challenges remain. Beyond the overall higher education funding issue, nursing schools are facing competition for clinical sites, burgeoning student demand, and a lack of nursing faculty. The Northeast Ohio Nursing Initiative (NEONI) is working on several fronts to address these issues. Strategies include: 1) Creating greater awareness among state and federal legislators of the nursing education crisis using the 2003 capacity survey data; 2) Initiating dialogue between nursing education and nursing services to expand clinical opportunities as much as possible; and 3) Exploring the feasibility of offering an online entry level RN program with both ADN and BSN tracks available. This program works with local educational partners to address the demand of qualified students who are unable to enter traditional nursing programs due to space limitations.

The Northeast Ohio region has an outstanding reputation for high-quality nursing education and a wide array of excellent nursing schools. However, it is critical to the future of the healthcare industry that solutions to the challenges nursing schools face are addressed and achieved, not only for the industry's benefit, but for the benefit of our community and the healthcare consumer.

A Primer on the Nursing Education Process

In professional nursing there are two levels of practice, LPN and RN. The educational route to becoming an LPN is relatively short, nine to 12 months, while the route for an RN can be as short as two years in an associate degree (ADN) program, three years in a diploma program, or four years in a baccalaureate program (BSN) or the nursing doctorate (ND). The setting for an LPN program can be at a public high school, community college, or independent private school. RN settings include community colleges (ADN), hospital-based programs (diploma), and colleges or universities (BSN/ND). While the ADN programs typically reside in state-funded institutions, the diploma, BSN and ND programs may be within private or state-funded institutions. In contrast, while there is a single educational route for LPNs to be eligible to take the national licensure exam, the variety of routes to become an RN all lead to student's



Understanding the NCLEX®

The practice of nursing in the United States and its territories is governed by a regulating authority within each jurisdiction. Each jurisdiction (state or territory) has a board of nursing whose main responsibility is to oversee the practice of nursing, including licensure. In Ohio, the mission of the Ohio Board of Nursing (OBN) is to actively promote and protect the health of the citizens through the safe and effective practice of nursing as defined by law. In simple terms, the OBN oversees the approval of nursing education programs and the legal practice of nursing.

The National Council of State Boards of Nursing (NCSBN) develops two tests for each level of professional nursing (NCLEX -PN® and NCLEX -RN®) that are used by local boards of nursing to help with licensure decisions. To be eligible to take the NCLEX®, candidates must apply for licensure in the state/territory in which they wish to be licensed (practice nursing). They must also meet all of the local board's eligibility requirements, along individually registering for the examination. In 1994, the NCSBN began administering the national examination by computer at local test centers. In Ohio, Sylvan Learning Centers administer the NCLEX®. A candidate may register for a testing appointment after receiving approval from the OBN to take the test.

Candidates have up to five hours to complete the examination, which tests their knowledge, skills and abilities to safely and effectively practice nursing. An NCLEX-RN® examination may be from 75 to 265 items long while the NCLEX-PN® test ranges from 85 to 205 items. The format of the test is varied and includes multiple choice with a single response, multiple choice with more than one response, and fill in the blank. The length of the test is determined by the candidate's responses with a suggested response time of one question per minute. Once a minimum number of items are completed, testing stops when there is 95 percent certainty that the candidate is either above or below the passing standard. The number of questions candidates answer does not determine passage or failure. The NCLEX® pass standards are reviewed every three years and candidates must score above the minimum in order to pass. In 2003, nationally there were 124,739 RN candidates with a 71 percent pass rate and 56,581 PN candidates with a 79 percent pass rate (includes both first-time and repeat test-takers).¹²

In December 2003, the NCSBN raised the passing standard on the RN examination to coincide with changes in the healthcare delivery system and nursing practice. Citing the fact that entry-level RNs are caring for sicker patients, the 1998 pass standard was changed to reflect a greater level of knowledge, skills and abilities needed to safely practice nursing. The new standard became effective April 1, 2004.¹³

eligibility to take the RN national licensure exam (NCLEX®).

There are no legal (licensure) distinctions in the RN nursing practice related to the educational background of the RN. Essentially all RNs, regardless of education, can perform all the duties and responsibilities within the scope of the RN license and the state where that nurse is licensed. This “different routes, same destination” issue for RNs has created ongoing controversy for educators as well as employers in terms of work assignment and salary. Recently it became the subject of research examining the relationship between the educational level of staff nurses and patient mortality. Although somewhat controversial among nurse educators, a 2003 study of 168 hospitals in Pennsylvania found that mortality for surgical patients was twice as high when the percentage of nursing staff with bachelor's degrees was low.¹⁴ In other words, surgical patients had a better chance of post-operative survival (5 percent decrease in mortality) in hospitals where there were higher proportions of nurses with baccalaureate education (10 percent increase of BSN degrees).

In the United States (not including the territories), there are 1,581 pre-licensure RN programs and 1,431 pre-licensure LPN programs (total of 3,012).¹⁵ Worth noting is the rapid growth of accelerated baccalaureate nursing programs (A-BSN), now numbering 129 in the country, with 4,794 students enrolled in 2003 and 1,352 graduates to date. Typically, students entering an accelerated program hold a bachelor's degree in another discipline, and have either completed or are in the process of completing prerequisite science courses. The demands of the accelerated programs attract students who are highly motivated and willing to commit to a rigorous course of study, usually over a continuous 15-month period. Program completion results in the student's eligibility to take the NCLEX®.

Another less common pre-licensure nursing education program is the nursing doctorate (ND), which was developed at the Frances Payne Bolton School of Nursing located at Case Western Reserve University in Cleveland, Ohio. The ND program is designed with multiple entry points for students, including a pre-licensure program for students with a non-nursing baccalaureate and a post-licensure program for BSN and MSN-prepared students.



Northeast Ohio Nursing School Profile

In Ohio there are a total of 110 nursing education programs – 25 BSN, 29 ADN, six diploma and 50 LPN – with 17 percent of the nursing programs (19)¹⁶ located in Northeast Ohio.¹⁷

It needs to be noted that an educational institution may offer more than one type of nursing education program. For example, a community college may offer LPN and ADN programs. A four-year institution may offer a BSN as well as an A-BSN program. A variation on a program such as A-BSN for schools that have a generic BSN program is not counted by the OBN as another program. While not specific to this report, a four-year institution may offer additional nursing programs in master's and doctoral study. With advances in electronic learning (e-learning) and the surge of college-university partnerships, students enrolled at one educational institution may complete coursework offered by a partnering higher degree educational institution that offers the program at the student's home school campus. Although limited in number, to date there are partnerships in Northeast Ohio between a community college and two different hospital employers offering RN or LPN programs to employees at the employment site rather than the traditional on-campus setting.

Across the region, the 2003 Northeast Ohio Nursing School Capacity Survey (NEO Capacity Survey) found that 15 participating nursing schools offered a total of 22 programs. While LPN is the most common with eight programs, there are also five BSN, two A-BSN, one ND, four ADN, and two diploma.

Tuition

The median cost of in-state tuition among Northeast Ohio nursing schools annually is \$5,400, with a median of \$175 per credit hour. **Table 2** provides average costs based on the number of credits or contact hours that must be earned to complete each type of nursing program. Caution should be used in looking at this information since credit hours or contact hours required to complete a program vary among institutions. The information is given to provide a point of reference of cost differences between various types of nursing programs.

Table 2: Average Total Cost of Nursing Programs In Northeast Ohio

| Type of Program | Range of Required Credit Hours or Contact Hours | Total Cost In-State | Total Cost Out-Of-State |
|-----------------|---|---------------------|-------------------------|
| LPN | 42 | \$3,181 | \$6,109 |
| Diploma | 98-130 | \$18,473 | \$18,522 |
| ADN | 70-73 | \$5,375 | \$15,230 |
| BSN | 70-133 | \$42,368 | \$65,380 |
| A-BSN | 66 | \$16,038 | \$22,638 |
| ND | 63 | \$59,094 | \$59,094 |

Learning Options

Student learning options have dramatically changed over the past 10 years in all fields of study, in part to meet the demands of working students, but also due to improvements in learning technology and the need to maximize educational resources. In the Northeast Ohio Capacity Survey, schools reported that part-time enrollment is the most common route, with 75 percent of all programs offering this option. Internet learning (e-learning) is also quite common, with over half (58 percent) of programs offering e-learning of some type. At least 50 percent of the programs offer television-based distance learning and as referred to earlier, 42 percent have an extended campus location.

Traditionally, nursing education has been a full-time course of study offered on a weekday schedule. Now, 42 percent of the nursing programs offer evening coursework. Yet, only 8 percent have a weekend program, which may be due in part to the inability to hire faculty who are able to accommodate a work-life schedule that requires weekend work responsibilities.



Nursing Program Clinical Sites

A component of the nursing education process is a required rotation of various clinical sites. Although nurses are educated in the traditional textbook sense, actual hands-on (experiential) learning is necessary. A critical competency in nursing practice is the ability to apply textbook knowledge to actual patient situations using a critical thinking process. Part of this progression occurs as nursing students hone their skills in a controlled (nursing school learning laboratory) setting on the school campus that provides patient (mannequin) and computer simulation, or a combination of both (computer-simulated mannequin).

As the education process continues, students are required to practice these skills in a variety of healthcare settings (acute care, long-term care, public/community health) in situations with real patients. Nursing schools must secure a number of clinical sites through contractual arrangements with healthcare providers to provide these experiences. In addition, schools must provide clinical faculty (clinical instructor) to accompany the students during their clinical rotation. In Northeast Ohio, 12 different sites on average are used by nursing schools for clinical training, however the range reported was from one to 66 sites. In total, 380 clinical sites are used by reporting schools to provide clinical training. As expected, the majority of clinical rotations occur during the week on day shift. However, the least used weekday was Monday (37 percent) and only about a third of the programs used weekends, Saturday (37 percent) and Sunday (36 percent).

With regard to the need for additional clinical sites, 70 percent of the schools reported that there was a need for additional clinical training sites, with the highest demand for acute care and psychiatric care (27 percent for each), and pediatrics (23 percent).

Many schools (60 percent) report creating partnerships with local hospitals or a part of a healthcare provider system (15 percent). However, the schools that did not have this type of relationship (25 percent) were confined to ADN or LPN programs. The most frequently reported benefits of partnership included student scholarships (45 percent), classroom space (50 percent), and clinical instructors (27 percent)¹⁸. Less common were financial assistance to the nursing school (18 percent) and equipment/supplies (9 percent).

Clinical Ratios

There are minimum nursing program parameters and outcomes set by the OBN in addition to those set by the nursing school and any other professional nursing education program accreditations the school may hold. Schools maintain ratio requirements for the number of students per clinical instructor for each clinical rotation, known as a “clinical ratio.” In terms of nursing program expansion, the clinical instructor-to-student ratio is cited as one of the most significant challenges in terms of securing enough clinical faculty (and sites) to meet the ratio requirement and most often dictates the number of students accepted into the nursing program.

In Northeast Ohio, on average there are 40 classroom students and 9 clinical students per each type of instructor respectively. However, some programs have as many as 75 students per classroom instructor and 15 students per clinical instructor. There are distinctions between the faculty assigned to classroom and clinical responsibilities, mostly in terms of employment (full-time, part-time) and education level (BSN, master’s or doctoral level). Faculty salaries are unrelated to student-faculty ratios.

Accreditation

The pass-rate thresholds for graduates taking the NCLEX®- RN and PN examinations are one of the criteria that the OBN maintains as a requirement for program approval. In Ohio, the pass-rate threshold is 95 percent of each program’s graduates taking the exam for the first time. Mentioned previously, there are a variety of optional professional education program accreditations that schools choose to hold, depending on the type of program (LPN, ADN or BSN). Given that not all schools are eligible for every type of nursing program accreditation, the most frequently held accreditation locally is the NLNAC (55 percent of schools) offered by the National League for Nursing.

Nursing Student Profile

Application Trends

Table 3 illustrates information compiled from the 2002-2003 OBN Executive Summary of pre-

Table 3: Supply of Ohio Nursing Program Applicants

| 2002-2003 Ohio Nursing Program Applicants | RN | PN (LPN) |
|--|-------|----------|
| Number of available program slots | 8,103 | 4,184 |
| Number of filled slots | 7,615 | 3,946 |
| Percent of program filled | 94% | 94.3% |
| Number of applicants not meeting academic requirements | 2,241 | 1,627 |
| Number of applicants denied due to lack of program slots | 3,356 | 1,504 |

Source: *Annual Reports From Ohio Prelicensure Nursing Education Programs, June 30, 2002 through July 1, 2003*

licensure nursing education programs regarding applicant volume.

In comparison, the NEO Capacity Survey (**Table 4**) provides additional information about student enrollment by including the number of student applicants, program acceptance, actual enrollment (defined as starting the coursework) and unfilled slots over a three-year academic period (2000-2003).

In **Table 5** (p.10), the data from Table 4 is expressed as proportions. Most noteworthy is that overall, the number of nursing school applicants more than doubled from 2000-2001 to 2002-2003 (1,543 to 3,149 admissions) and the number of enrolled students grew by 73 percent (from 1,050 to 1,820).

As mentioned previously, the proportion of applicants who met minimum criteria decreased over the past three years from 68 percent to 55 percent. However, this decrease is not perceived to be negative. There were many more applicants (applications doubled) who applied to a nursing program than nursing education slots available. Indirectly, this increase in applications demonstrates the growing demand in the community to enter the nursing workforce, especially during a time of economic downturn and high unemployment.

Table 4: Supply of Northeast Ohio Nursing School Applicants, Accepted & Enrolled Students

| | 2000-2001 | 2001-2002 | 2002-2003 |
|---|-----------|-----------|-----------|
| Number of applicants | 1,543 | 2,340 | 3,149 |
| Number of qualified applicants | 1,054 | 1,308 | 1,745 |
| Number of students accepted who enrolled (began coursework) | 1,126 | 1,517 | 1,967 |
| Number of unfilled slots | 91 | 49 | 45 |
| Number of unfilled slots due to "no-shows" | 31 | 29 | 18 |

Note: The number of accepted students is larger than the number of qualified applicants due to the enrollment of wait-listed students.

Table 5: Proportions of Northeast Ohio Nursing Schools Applicants, Accepted & Enrolled Students

| | 2000-2001 | 2001-2002 | 2002-2003 |
|--|-----------|-----------|-----------|
| Number of applicants | 1,543 | 2,340 | 3,149 |
| Percentage of applicants who met minimum admission criteria | 68% | 56% | 55% |
| Percentage of applicants accepted | 73% | 65% | 62% |
| Percentage of accepted students who enrolled (began coursework) | 93% | 95% | 93% |
| Percentage of slots unfilled | 7.9% | 3.2% | 2.4% |
| Percentage of slots unfilled due to “no-shows” | 2.7% | 1.8% | .9% |

Admission Policies & Practices

In Northeast Ohio, the majority of schools admit students once a year (71 percent) with most schools (62 percent) graduating students once a year. In terms of minimum admission criteria, the most common measurement used

across all programs is the grade point average (GPA) among the 15 reporting programs. However, six programs indicated using either the SAT or ACT, which is typical of the required admission criteria among many college and university programs. Interestingly, one program reported using the completion of the STNA (State Tested Nurse Assistant) or Nurse Aid Training Program as additional criteria.

An admission test (NET/Nursing Examination Test) is most frequently used among LPN programs (six out of eight) but its use is not widespread among other programs, with 62 percent choosing to use other criteria. However, educators commented that the use of an admission test is growing, since many applicants are adults and do not have recent SAT scores, never took the SAT, or performed poorly in high school.

With regard to recent admission criteria changes, nine programs reported that they had actually “raised the bar” for student admissions in an attempt to decrease student attrition. Some of the criteria changes included required reading and mathematic skill tests, standardized nursing school entrance tests, and increasing the minimum GPA rates. Since student pass rates on the NCLEX® relate directly to the nursing program’s approval by the OBN, it is critical schools maintain quality standards by accepting only those students who are most likely to succeed academically.

Qualified Students Denied Program Admission

In the 2002-2003 academic year, 553 qualified candidates were denied academic admission due to a lack of nursing slots. Comparing the OBN 2002-2003 data with that from the NEO Capacity Survey, approximately 11 percent of the statewide total of 4,860 RN/LPN students who were denied program admission were from Northeast Ohio.¹⁹ Programs actually grew by 73 percent from 2000-2001 to 2002-2003 but **30 percent more growth** would have been needed to accommodate this volume of student demand. The primary reason Northeast Ohio schools cited for not accepting more students (60 percent of programs) was that the school was already at capacity with its faculty/student ratio. A secondary reason (18 percent of programs) was insufficient clinical opportunities.

In contrast, unfilled slots in 2002-2003 occurred among five programs indicating this was a minimal issue since it was only 2.4 percent of all available slots. According to the five program administrators who responded, unfilled slots were due to a “lack of awareness in the community,” meaning individuals seeking a career (via an educational program) were unaware of the need for nurses.

Administrators also cited “not enough qualified candidates” as a secondary reason contributing to unfilled slots.



Scholarship Funds

As the cost of post-secondary education rises across all types of programs, the need for scholarship funds has become an increasingly important mechanism to offset tuition costs. It needs to be noted that scholarship funds are different than financial aid. Financial aid is administered through a school's financial aid office and available to financially eligible students regardless of their educational pursuits. In the NEO Capacity Survey, scholarship funds to support nursing education were the specific focus.

Looking at the 2002-2003 academic year, almost half (43 percent) of program administrators were unaware of the total amount of scholarship funds available for their incoming students. Forty-seven percent said the median total amount for **all** students in the region was \$46,000 and 10 percent said that "zero" funds were earmarked for nursing students. Adding all the enrolled students with the total available (reported) scholarship funds for nursing students, the Northeast Ohio region offers \$323 per student. As an inducement to increase the number of new nurses, many local Northeast Ohio hospital employers offer "tuition assistance and/or loan forgiveness" if the graduating nurse accepts employment for a specific period of time.

With regard to financial aid, more than two-thirds of programs did not report the number of students receiving financial aid, further suggesting that this information is unavailable to program administrators. The six programs that were able to respond indicated that financial aid to nursing students has increased from 78 percent of the enrolled population in 2000-2001 to 89 percent in 2002-2003.

Enrollment Trends

In 2003, there were a total of 10,633 RN and 3,472 PN/LPN students enrolled in Ohio nursing programs.²⁰ In Northeast Ohio, nursing programs have seen a 41 percent enrollment increase over the last three academic years (2000 to 2003) from 2,400 to 3,382 students (**Figure 1**.)

These numbers reflect the total number of students enrolled in all years of study across the various programs. Although the average program size has changed only slightly, from a median of 66 to 72 per program, there was an increase in the region in the total number of students enrolled, mostly due to the larger programs significantly increasing their numbers.

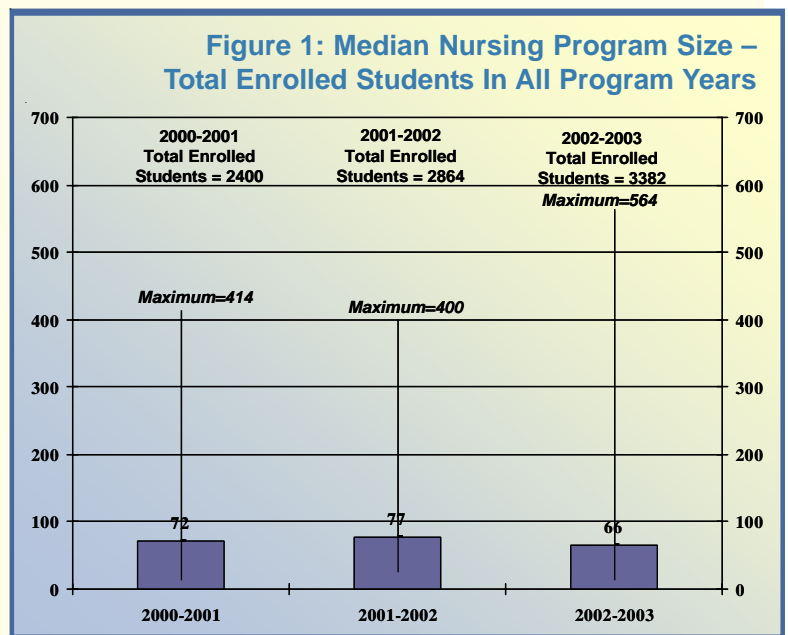


Figure 2: Northeast Ohio – Nursing Program Enrollment Students in All Program Years (1st year, 2nd year, etc.) 2002-2003 Academic Year Only By Program Type

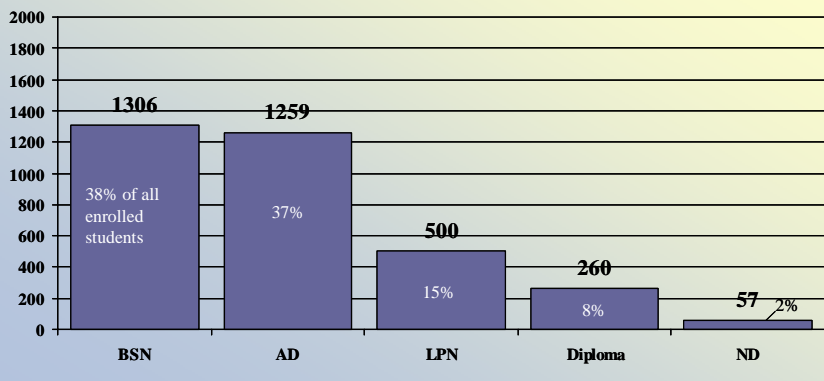


Figure 2 illustrates 2002-2003 enrollment by type of program, with BSN programs enrolling the most students with 1,306 individuals and ADN with 1,259 students. Although PN/LPN programs are the most common type of nursing program (eight of the 22), class sizes are relatively small with their students making up only 15 percent of the total nursing student enrollment.

With regard to part-time enrollment, programs with part-time status increased from 27 percent of programs in 2000-2001 to 36 percent of programs in 2002-2003. As compared to total enrollment, the number of part-time students is small at only 9.6 percent of the total 2002-2003 enrollment.

Age and Race/Ethnicity

The demographics of enrolled nursing students reflect little change in age over the past three academic years from a median of 28 years to 28.5 years. Interestingly, the age range for any program over the time period extended from 21 years to 48 years on average. The LPN and ADN/diploma programs tend to have the “oldest” students, averaging 32 and 28 years respectively, but even the average age among BSN students was 25 years.

Given that nursing is seen as a traditionally female career, 80 percent of nursing students in Northeast Ohio on an annual basis are white females. However, African-American females account for 11 to 12 percent of annual local enrollment. Over the past three academic years, there has been a slight increase in white male enrollment from 2 percent to 5 percent, but there has been no increase among African-American males, who have remained steady at 1 percent each year. As a comparison, in 2000 only 5.4 percent of all nurses nationally were male.²¹

Given the recent number of Northeast Ohio layoffs, particularly in traditionally male industries such as manufacturing, it would be interesting to know what percentage of the applicants denied nursing program admission in 2002-2003 were male.

Nursing Program Graduation/Attrition Trends

Table 6 is a compilation of Ohio graduation rates in RN and LPN/PN programs.

| Graduation Year | RN Programs | LPN/PN Programs | Total |
|-----------------|-------------|-----------------|-------|
| 2002 | 3,337 | 1,798 | 5,135 |
| 2003 | 3,430 | 2,172 | 5,602 |

Source: Ohio Board of Nursing Executive Summary June 30, 2002-July 1, 2003

In Northeast Ohio, programs were asked to provide information about students leaving a program before graduating, or student attrition, as



well as graduation rates in order to determine actual program output. This information is provided in **Figure 3**.

Overall, the *proportion* of students graduating has increased from 78 percent in 2000-2001 to 82 percent in both 2001-2002 and 83 percent in 2002-2003. Note that the actual program numbers have increased as well. Of significance is that the percentage of nurses graduating *actually increased by 25 percent* over the past three academic years in terms of proportional comparisons.

In contrast, program attrition was more likely to occur in the first year of the program according to 75 percent of the programs. A student's inability to meet academic demands was cited as the most frequent reason (66 percent of programs) while other students left due to non-academic demands (23 percent). Few left due to other reasons such as inability to pay tuition (3 percent), transferring to another school (2 percent) or changing their field of study (1 percent).

It is interesting to make a comparison between the few students who left a nursing program to pursue other academic interests and the licensed nurse population in Ohio. In the 2003 OBN survey of licensed nurses, LPNs and RNs were asked how satisfied they were with their current employment. Of those who responded (overall survey response was 53 percent or 96,000 nurses), only 2 percent said they were very dissatisfied with choosing a nursing career but 77 percent said they were satisfied.²² This response suggests that many individuals who choose nursing as a career tend to sustain their satisfaction with their decision throughout their career.

Licensure Pass Rates/ Post-Graduation Employment

In 2002, 18 nursing programs in Ohio reported a 100 percent NCLEX® pass rate for their graduates, with 91 percent of all programs meeting or exceeding the national pass rate. The numbers of new licenses issued in 2002 were 3,684 RN and 1,896 LPN.²³ As shown in **Figure 4**, although only about half of the schools reported data, the number of students passing the NCLEX® has remained relatively stable. It needs to be noted that the number of students taking the exam in 2002-2003 is an underestimate since at the time of data collection not all eligible students would have taken the exam.

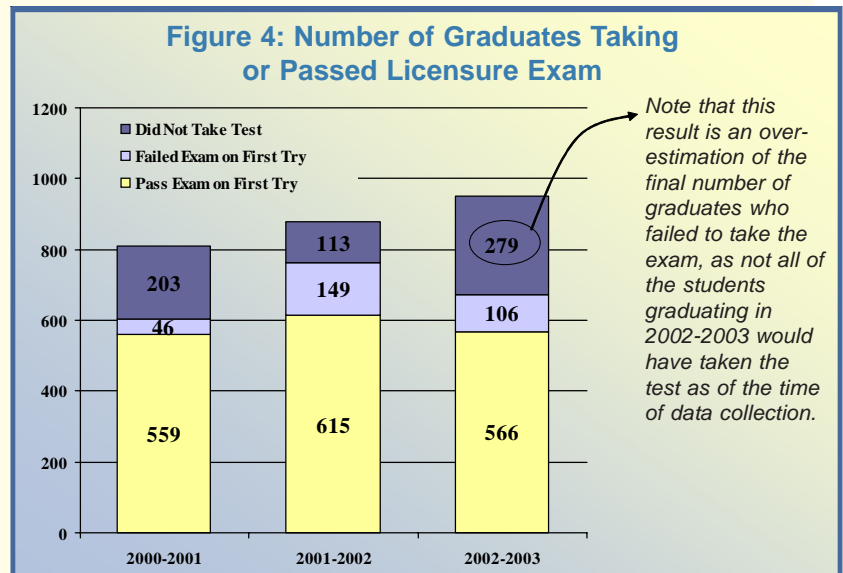
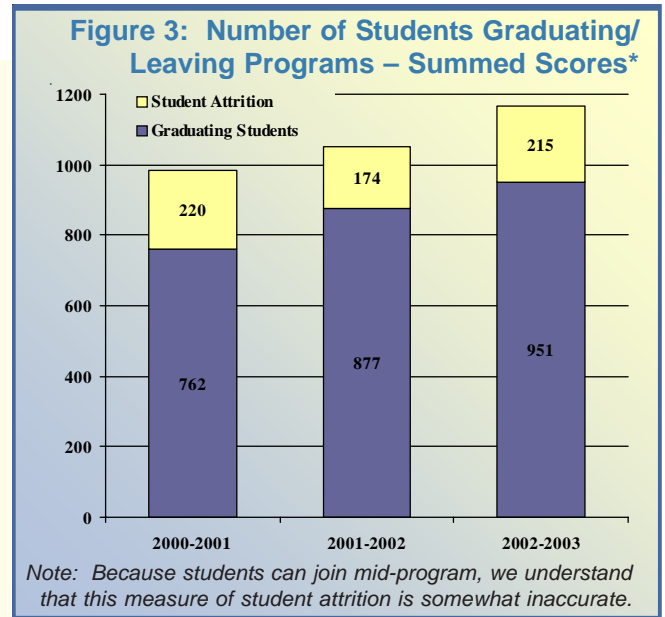
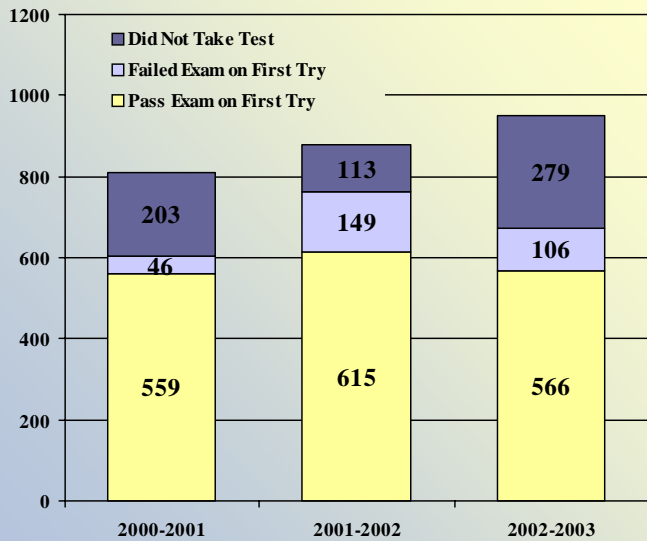


Figure 5: Number of Nursing Program Graduates Employed in Ohio



A large majority (77%) of nursing school graduates in Northeast Ohio were known to have obtained nursing jobs within Ohio after graduating from nursing school in 2002-2003.

With regard to employment, most schools report that a majority of their program graduates (77 percent) in 2002-2003 found employment and remained in Ohio (Figure 5).

Nursing Program Expansion – Keeping up with Demand

Over the past 10 years, nursing school enrollment nationwide decreased by 50,000 due to a lack of career interest, shortage of faculty and insufficient training space.²⁴ In response, schools reduced their number of available student slots or even closed their


programs altogether. Now that nursing program applications from students far exceed available slots, schools are put into the difficult position of trying to expand when financial resources for colleges and universities in Ohio have decreased in order to balance the state budget. And since the nursing shortage is across the board, the availability of qualified nursing educators is even more limited since most programs require staff with advanced educational degrees (master’s and doctoral) that a majority of nurses lack and have limited interest in pursuing as evidenced by the declining enrollments in these types of programs nationwide.


Plans to Expand

Among Northeast Ohio nursing program administrators, about half (11 programs) plan to keep their programs at the same size while the other half (11 programs) plan to expand. Of those programs intending to expand, the total amount that programs would increase would be an additional 305 students or about 9 percent over the 2002-2003 enrollment. The primary reasons for expansion are student demand and employer demand. Both these factors outweigh a lack of availability of faculty or space. Further, when asked specifically about barriers to program expansion, limitations of classroom space and sources for funding faculty salaries were the top two responses. However, given some fairly significant hurdles, most administrators responded that they wanted to see their programs expand.

Defining the Waiting List

One of the most misunderstood terms in nursing education is the term “waiting list.” Waiting lists are used by nursing programs to help manage the flow of academically qualified students when there are more students than program slots available. In Northeast Ohio a student can be put on a waiting list in the following situations:

 **Waiting to Enroll** -The student has successfully applied to the nursing program and been accepted but cannot begin any coursework (enroll) until a program slot opens up, usually at the beginning of the school term. Since the size of each clinical course is dictated by the student-clinical instructor ratio, this limits the number of students in the course.

 **Enrolled but Waiting to Begin Nursing Coursework** - The student has successfully completed required program prerequisite college courses (math and science) and must apply to the nursing program for a student slot. Since many students pursuing a health or science-related career take the same prerequisites, this allows for large class sizes. However when the student reaches the point of specifying nursing as their career major, they must apply to the nursing program that may or may not have an opening, again most likely based on the student-clinical instructor ratio. Therefore students “wait” until a slot in the nursing program is available, which lengthens the overall educational process and ultimately delays the individual from entering the nursing workforce.

Northeast Ohio Nursing Program Waiting Lists

In Northeast Ohio, about 50 percent of the programs require the student to complete the nursing program prerequisites before being recognized as a “nursing student.” Across all types of programs, ADN and LPN/PN programs were more likely to have waiting lists and the lists can vary in length from one semester to more than three years. It needs to be noted that of the programs with waiting lists, only 55 percent plan on expanding in the near future (three ADN, one diploma, and two PN/LPN programs). In the BSN programs, students are placed on a waiting list if they do not gain admission into the nursing program to continue their studies. According to the BSN programs, unless an opening occurs due to a student slot not being filled for one reason or another, students must apply again at the appropriate time. Therefore, BSN programs generally “dissolve” the waiting list each year once classes begin.

There are currently 922 prospective students (applied and been accepted) who are waiting to begin a nursing program from ADN, diploma or LPN. This represents 28 percent of the current nursing program enrollment. ADN programs have the majority of students on a waiting list (576). Therefore programs in Northeast Ohio would have to expand significantly to accommodate all of these qualified students. While there is no way to determine if any of the 922 students are on more than one program waiting list since there is no “central” database of students, given the cost and time to apply to even one nursing program, it is unlikely there are a significant number of “duplicate students.”

Programs were asked how they “manage” their waiting lists and from their descriptions, local schools offer enrollment at the earliest possible time. Students who decline are removed from the list.

Nursing Program Faculty Profile

Faculty Composition

Table 7 provides detail on the faculty composition of nursing programs in Northeast Ohio.

Table 7: Numbers/Types of Northeast Ohio Nursing School Faculty

| | 2002-2003 | Percent of Total Faculty |
|---|--------------|--------------------------|
| Number of Full-Time Faculty – Classroom* | 300 | 76% |
| Number of Full-Time Faculty – Clinical** | 94 | 24% |
| Number of Current Faculty Openings*** | 23 | 6% |
| Number Left during 2002-2003 Academic Year | 26 | 6% |
| Number Planning retirement in the next five years | 32 | 8% |
| Average Age of Faculty (Median) | 47 years old | N/A |

*Additionally there were 39 part-time classroom faculty.
 **Additionally there were 220 part-time clinical faculty.
 ***Additionally there were four part-time faculty openings.

It is interesting to note that while the majority of **classroom** faculty are full-time (300), the majority of **clinical** faculty are part-time (220). The AACN, a national organization of four-year colleges of nursing, reports a faculty vacancy rate of 8.6 percent, with most of the vacancies related to faculty positions that require a doctoral degree.²⁵ In Northeast Ohio, there is a 6 percent vacancy rate (23 openings) across all nursing programs including those offering a four-year degree.

In terms of retirement, Northeast Ohio programs reported that about 32 educators, or 8 percent of the current faculty workforce, intend to retire within the next five years. While this number seems rather low when compared to the 18.2 percent of responding licensed RN and LPN nurses from the 2003 OBN survey who intend to retire over the same time frame, national graduation rates from master’s and doctoral programs have decreased by 2.5 percent and 9.9 percent respectively.²⁶ This is of concern considering that falling enrollments in advanced degree programs will result in further limitations on program capacity.

Of more immediate concern is the number of faculty (26 faculty) who have left area nursing education programs. While there were eight faculty retirements, 18 faculty left due to non-retirement reasons such as return to service (8), securing another teaching position (5 faculty) and personal reasons (5).

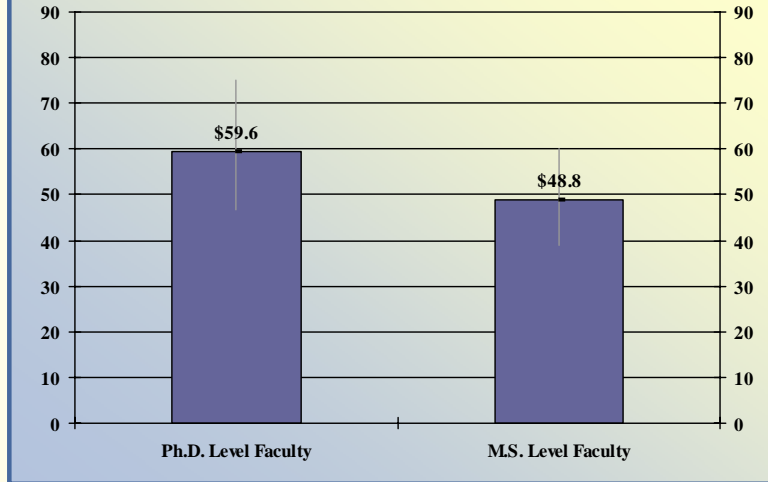
It is an understatement to report that a gap in salaries exists between nurse faculty and nurses working in the service sector. In Northeast Ohio, programs report that faculty with a master’s degree have a median salary of

Retiring Age of Nurse Educators and Nurse Faculty

Nursing Outlook reports that the average age of nursing faculty is 51.2 years nationally, while the average age of faculty in Northeast Ohio is somewhat lower at 47 years. Nationally, the average age of nurse educator retirement is 62.5 years, with doctorally prepared nurses retiring at 53.5 years. In the United States, approximately 200-300 doctorally prepared faculty are eligible to retire each year over the next nine years with 220-280 master’s-prepared faculty eligible between 2012 and 2018.²⁷



Figure 6: Median Northeast Ohio Nursing Faculty Salary (10-months)



\$48,800 and those with a Ph.D. have a median salary of \$59,600 (**Figure 6**).

While these are 10-month salary amounts, the annual median salary in 2001 for a hospital staff nurse in Northeast Ohio was \$45,697, with only 4 percent of the nursing workforce reported to have an advanced nursing degree (master's/doctoral).²⁸ In terms of "sponsoring" the pursuit of advanced education, only half of the region's nursing programs offer any type of tuition reimbursement. The options are

actual dollars, \$1,000 to \$4,500; reimbursement by credit hours; unlimited reimbursement for full-time; 4 credits per semester for part-time; and up to 15 credits per year. For most faculty, the responsibility for funding an advanced nursing degree while employed as a faculty member is placed back on the individual. However, in the past few years some financial help has been made available through federal government programs such as the Nurse Reinvestment Act (NRA) and those developed in some states and local communities.

Recruitment Challenges

It was previously reported that nursing program administrators felt the most significant challenge to program expansion was the availability of classroom and clinical faculty. Probing further, two significant hurdles were identified: most applicants found the salary to be lower than in the service sector and most applicants lacked the background/preparation in education and curriculum.

While the salary has been discussed previously, the issue of appropriate educational background goes beyond having an advanced nursing degree. In fact, administrators reported little difficulty in finding candidates that met academic (credential) requirements or even attracting enough candidates. Rather, concern is focused around the requirement that faculty must have experience in education theory and techniques. Unless their advanced degree program provided that preparation, or candidates gained it through other employment, this is perceived as a barrier to employment. In terms of the impact on program expansion, administrators reported that the issue of recruitment is a major problem, with most of the difficulty centered on competitive salary. But of even more significance is the issue that salary may hinder program expansion to the point that it will be one of

Understanding the Nurse Reinvestment Act (NRA)

The federal Nurse Reinvestment Act (signed in 2000), commonly referred to as the NRA, is an amendment to the existing Title VIII of the Public Health Service Act, which is specific to nursing education. The NRA added six new provisions to Title VIII, including nursing scholarships and a nurse faculty loan program, both of which provide support to individuals with a payback provision following graduation. The payback requirement for a nursing scholarship requires the nurse upon graduation to work in a healthcare facility with a critical shortage of nurses for two years. If the scholarship is to support nurse faculty education, there is a full-time teaching requirement for four years. In either situation, graduates can cancel 85 percent of their student loan over the payback period. With nurse educators, the nursing school receives the funds and establishes the loan with the student. Nursing schools that offer faculty loan programs may be found online at www.bhpr.hrsa.gov/nursing.²⁹ For federal fiscal year 2005, the Senate Appropriations Committee is recommending \$4.8 million for the nursing faculty loan program.³⁰

the insurmountable barriers to Northeast Ohio nursing programs being able to expand further. Obviously, this has serious implications for the future of nursing programs. Ironically, even if there is an increased output of qualified nursing faculty through new and innovative programming, the competition with the service sector to offer higher, more competitive salaries may continue to threaten the supply of nurse educators.

Closing Comments

The information from the 2003 Northeast Ohio capacity survey should be viewed in terms of achievement and alarm. Without question, Northeast Ohio nursing programs have much to be proud of – quality programming resulting in a large number of licensed nurses and the perseverance of local nursing schools in expanding programs even further during a time of shrinking state education funds to support higher education. It is clear from the survey data that Northeast Ohio nursing programs are struggling in four areas: decreased state funding due to cuts in higher education, competition for clinical sites, burgeoning student demand, and attracting adequately prepared nursing faculty. The following list identifies several areas where the Northeast Ohio Nursing Initiative (NEONI), a consortium of local healthcare employers and educators working on the local nursing workforce shortage, feels an impact can be achieved.

NEONI Strategies:

★ **Use Data to Create Awareness and Action:** Create dialogue with state and federal legislators to increase their understanding of the current financial constraints and barriers to expansion of Northeast Ohio nursing schools using data available from the 2003 Northeast Ohio Capacity Survey.

★ **Expand Clinical Opportunities:** Create regional dialogue between nursing education and nursing service to address the issue of clinical placements and the potential to secure classroom space off-campus so that schools may continue to maximize their own enrollment capacity.

★ **Expand Opportunities in Nursing Education:** The traditional methods used to educate students have changed dramatically in the past 10 years. In order to address the nursing faculty limitations with student enrollment demand, NEONI is examining the feasibility of implementing an innovative national prototype model of an e-learning entry-level RN program that offers the ADN and BSN programs in partnership with local schools of nursing.

The Northeast Ohio region has an outstanding reputation for high-quality nursing education and a wide array of excellent nursing schools. However, it is critical to the future of the healthcare industry that solutions to the challenges nursing schools face are addressed and achieved, not only for the industry's benefit, but for the benefit of our community and the healthcare consumer.

An investment in knowledge pays the best interest.

-Benjamin Franklin (1706-1790)

Endnotes

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- ⁹ The Northeast Ohio Nursing Initiative (NEONI) is a consortium of healthcare employers, nursing educators, professional nursing associations and individuals working to address the nursing workforce shortage in Northeast Ohio. NEONI is a program of The Center for Health Affairs, Cleveland, OH.
- ¹⁰ At the time of the survey, one of the local practical nurse education programs was not eligible to participate due to recent OBN approval and no graduates to date.
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