



NEW JERSEY'S EDUCATIONAL CAPACITY: IMPACT ON THE NURSING SUPPLY 2006 RN Data Report

I. Introduction

The New Jersey Collaborating Center for Nursing was established through a public/private partnership between the State of New Jersey and the Robert Wood Johnson Foundation (www.RWJF.org). The Center is a future-oriented research and development organization that develops and disseminates objective information and provides an ongoing strategy for the allocation of State resources toward the nursing workforce. The New Jersey Collaborating Center for Nursing is a primary source for data based evidence from which to formulate reliable health policy that has a positive impact on nursing care, nursing education, and patient outcomes. The Center serves as a catalyst for the implementation of innovative practice and education models.

One of the Center's Initiatives has been to conduct an annual survey of all the Registered Nurse (RN) schools in New Jersey to measure and monitor faculty characteristics, enrollments, graduations, and student characteristics. Information was also collected about the use of articulation models, and accreditation status. Collected in the spring of 2007, the information presented below reflects survey responses from 100% of the RN schools of nursing statewide.

II. Review of Nursing Faculty in 2006

In 2006, the forty two schools that award nursing degrees reported that they had 626 budgeted Full-Time-Equivalent (FTE) faculty positions. Schools identified 42 of these positions as unfilled. Of these vacancies, 23 were associated with Baccalaureate schools, 13 were associated with Associate Degree schools and six with hospital Diploma schools.

However, the schools reported that they had 990 faculty members, made up of a combination of full time and part time/adjunct faculty members. Part time/adjunct faculty members are a means to meet the student demand for the schools. Of the total number of faculty members (990), 49.2% were full time faculty and 50.3% were part time/adjunct faculty. In addition, nursing schools were asked to calculate the number of months it takes to fill a vacant faculty position. The number of months ranged from two months to 24 months (two years). The average number of months needed to fill a vacant faculty position was six months in 2006.

Schools reported that 11 faculty members were expected to retire within the next year, thirty were expected to retire within the next three years and 46 were expected to retire within the next five years. This would result in 87 of the current faculty requiring replacement (plus 42 unfilled positions), without any increase in enrollments. If enrollments were to be expanded, additional resources would be needed. Part time/adjunct faculty have teaching responsibilities and generally are not involved in any other faculty activities, such as committee work, advisement of students, clinical practice, or research, thereby increasing the workload of full time faculty.

The table below outlines the race and ethnicity of faculty in the state. A majority of the nursing faculty in New Jersey are white (78%) followed by black faculty members (9.9%) and Asian/Pacific Islander faculty (5.5%). This ethnic distribution has not changed in the past year.

Table 1. Race and Ethnicity Percentages for Faculty at New Jersey Nursing Schools, 2006

Alaskan Native	Asian/Pacific Islander	Black	Hispanic	White	More Than 1 Race	Other
0.0%	5.5%	9.9%	4.0%	78%	0.3%	0.4%

III. Review of Articulation Models, Accreditation, Curricula Revisions and Nursing School Name Changes

In 1992, the New Jersey State Nurses Association (NJSNA) appointed a task force of nursing educators to develop a statewide articulation model that would create a seamless approach to articulation and enable nurses to move through educational levels with greater ease. In 2000, with a grant from the Helene Fuld Foundation, a new group gathered under the Colleagues in Caring project to revise the model. Because of the work of the Fuld Leadership Group, the voluntary statewide articulation model was revised. The Revised Articulation Model was endorsed by all RN schools in the State, with the exception of one AD school that later also endorsed the model. Two publications were distributed by the NJCCN to all schools of nursing in the state: (a) booklet designed for schools describing the program and its requirements and (b) a brochure for students. All schools of nursing and contacts were listed in the brochure.

Forty of the forty-two schools surveyed reported that they do follow the New Jersey Articulation Model. Of those 40 schools, twenty-seven schools indicated that they follow the model in its entirety, while eleven schools noted that they follow a modified version of the model. One school that does not follow the model has developed a cohort program that does award students significant credit for previous education and experience.

Table 2 (below) outlines the number of programs that offer the articulation model and any modifications that have been made to the model that differ from the original New Jersey Articulation Model for Nursing Education.

Table 2. Number of Nursing Programs that Utilize New Jersey Articulation Model for Nursing Education

Program Type	Number of Schools who use the Model	Reported Modifications to the Model
LPN to RN, Diploma	8	<ul style="list-style-type: none"> LPN enters in May and takes a six week Transition Course. If they successfully complete the transition course, they receive 15 Advanced Standing credits and enter 2nd year of generic program; We look at when the person graduated and what experiences they have had since graduating from their LPN program;

		<ul style="list-style-type: none"> • The prerequisite course, Introduction to Nursing, is waived for LPN applicants; • LPNs complete all first year college courses and can complete all nursing courses in 10 months.
LPN to RN, Associate Degree	13	<ul style="list-style-type: none"> • Applicants take NLN ACE as admission test rather than NET taken by generic applicants; • Credit granted for first semester nursing courses; not just the first nursing course; • Program was customized to meet school's needs.
RN Diploma to BSN	13	<ul style="list-style-type: none"> • Two schools do not use the same criteria for Diploma graduates as they do for AD graduates.
RN AD to BSN	15	<ul style="list-style-type: none"> • Accepts up to 96 credits in transfer for an AD in nursing; we do not bank credits, credits are issued as earned; • Courses for students with AAS degrees are reviewed for transfer on course-by-course basis, according to our transfer policy.

All New Jersey RN schools (42 schools total) were asked to identify their accreditation status with the New Jersey Board of Nursing (NJBON). Thirty-nine out of forty-two schools indicated that they were accredited by the NJBON. Three schools noted their accreditation status with the NJBON as “conditional or provisional” (they are new schools or have a new program).

All RN schools were accredited by either the National League for Nursing Accrediting Commission, Inc. or the Commission on Collegiate Nursing Education. Most schools had continuing accreditation with the exception of the new programs who have applied for initial status.

Thirty six out of forty two schools surveyed indicated that they had implemented curriculum revisions, the latest revisions occurring in 2006. Ten of these schools offered a BSN degree. In addition, twelve schools that offer an Associate Degree and nine schools that offer a Diploma in nursing implemented curriculum revisions. Below, Table 3 outlines the number of schools that have implemented curriculum revisions and the year that these revisions took place.

Table 3. Nursing School Curriculum Revisions, 1974-2006

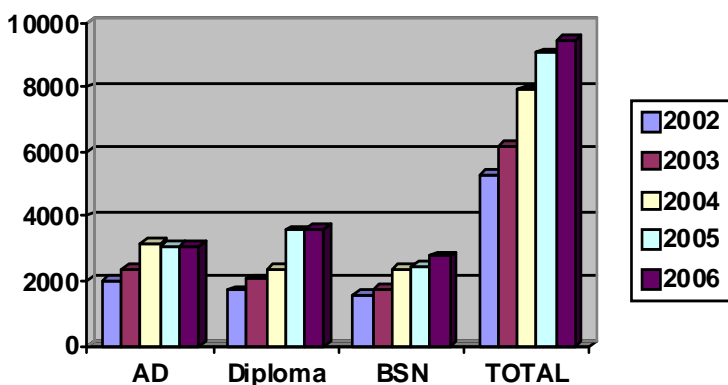
Date of Revision	Number of Schools	Date of Revision	Number of Schools
1974	1	2001	4
1982	1	2002	3
1995	1	2003	2
1997	1	2004	4
1998	1	2005	2
1999	2	2006	7
2000	2		

Eleven of forty two schools surveyed noted that the name of their school had changed within the past 10 years. Five of the schools that noted a name change offered a Diploma in Nursing, one school offered an Associate Degree in Nursing and five schools that noted a name change offered a BSN in Nursing. The school name changes were as follows: at The College of New Jersey from the School of Nursing to the School of Nursing, Health and Exercise Science; William Patterson College to William Paterson University; Atlantic Community College to Atlantic Cape Community College; Bayonne Hospital School of Nursing to Bayonne Medical Center School of Nursing; Helene Fuld School of Nursing to Capital Health System School of Nursing and the Mercer Medical Center School of Nursing closed; at Christ Hospital, the School of Nursing changed its name to Bon Secours Canterbury School of Nursing for a few years, it has since changed back to the Christ School of Nursing; Muhlenberg Regional Medical Center School of Nursing to Muhlenberg Regional Medical Center Harold B. and Dorothy A. Snyder Schools; Elizabeth Medical Center School of Nursing to Trinitas School of Nursing; at Monmouth University, from the Department of Nursing to the School of Nursing; Jersey City State College to New Jersey City University; and BSN Program at Thomas Edison State College to Thomas Edison State College School of Nursing.

IV. New Jersey RN Enrollments

We use the term, RN-producing and RN-enhancing enrollments and graduates. The RN-producing enrollments and graduates are those entrants whom upon graduation enter the supply pool of RNs that may work in New Jersey. The RN-enhancing enrollments and graduates include RNs who earn a BSN, in addition to their pre-service degree; master's; and doctoral nursing students. Each New Jersey RN-producing school was asked to report the total number of student enrollments in their programs. Sections IV and V represent the sum of all RN-producing schools (11 BSN-Generic Schools, 15 Associate Degree Schools, and 11 Diploma Schools) totaling 37 schools.

Figure 1. Total Enrollments for AD, Diploma, and BSN Schools from 2002 to 2006



As of October 15, 2006, the total number of enrollees for all types of RN-producing programs was 9,440 students. The number of enrollees delineated by program type included 3,051 Associate Degree students, 3,614 Diploma students and 2,775 BSN-Generic students. To put the data in context, we compared the number of RN-producing schools enrollees across a span of five years, from 2002-2006 in Figure 1 above. The percent change, or increase/decrease of

enrolled students from one year to another, has remained positive since 2002. There was growth most every year for all types of schools: BSN, AD, and Diploma. However, the growth in enrollments between 2003 and 2004 peaked with a 27.7% increase; while the increase between 2005 and 2006 was only 4% (see table 4 below). Between 2002 and 2003, the number of total enrollments increased by 17% with a 14% growth between 2003 and 2004. Since 2002, the schools have increased their enrollment capacity by 63.5%.

Table 4. Percent Change in Enrollments for Associate Degree, Diploma and BSN Schools between 2002 and 2006

School Years to Be Compared	Percent Change of Enrollees Between Years
2002-2003	17.4%
2003-2004	27.7%
2004-2005	14.7%
2005-2006	4.0%

Further, Warren Community College and Salem Community College recently began new Associate Degree programs, while Passaic Community College increased their enrollment of Associate Degree students by 30% with a grant from the Department of Labor. These increases added 151 students to the total enrollment numbers for 2006. If we control for these increases by removing the additional 151 students from the total enrollments for 2006, the percent change, or the increase/decrease of enrolled students between 2005 and 2006, declines from 4% to 2.3%.

Brookdale Community College was able to expand their enrollment as the College included extra funds for the Nursing Department. However, it should be noted that each year the numbers of students enrolled exceeded the number of assigned seats in each Associate Degree Program. All of the AD programs have turned away many qualified applicants each year, as have most BSN programs. The diploma schools have added faculty to increase their enrollments, but still cannot enroll all qualified applicants.

It is clear that many qualified students are denied admission because of lack of seats; the RN schools have reported as many as 1,500 students each year that have not been accepted because of a shortage of faculty lines and faculty applicants. It should be noted that the exact number of qualified applicants denied admission is not known as students do apply to several schools and will attend only one. Sometimes students register and then do not attend classes as they have a late acceptance to another school. Further, schools have different entrance requirements, some more stringent than others.

Students have the option of attending classes on a full or part time basis and these data were reported for the first time in 2005. Schools were asked to identify the percentage of newly admitted students that were full time and part time. There is a difference in the number of newly admitted full time versus newly admitted part time students attending each type of school. The vast majority (75%) of newly admitted students attending schools that offer a BSN and in some cases MSN, PhD and/or DNP degree, are full time, while about half of newly admitted students in Associate Degree schools and 47% of RN to BSN students attend part time, with Diploma schools reporting only 37% of newly admitted students attending part time.

The number of newly admitted students in the fall of 2006 for all three types of RN producing programs was 3,492 students. The numbers of newly admitted students broken out by type of program included 1,126 Associate Degree students, 1,325 Diploma students and 1,041 BSN- Generic students.

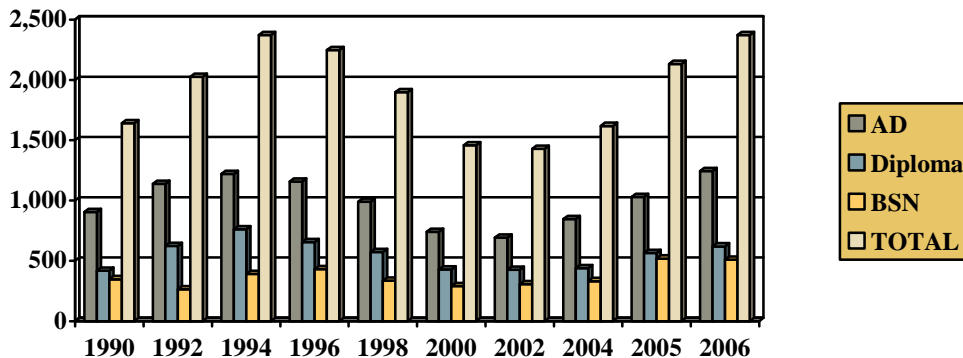
Further, the schools were asked if the interest by prospective students had increased, decreased, or stayed the same. Twenty nine of the programs reported a similar interest in nursing by prospective students with 17 schools indicating a significant increase, >20%, in interest, and one reporting a decrease in interest. This compares to 2005 when 22 schools reported no change in interest, 19 schools (one new school had no comparison) reporting an increase in interest with one school reporting a decrease in interest.

V. Graduates of RN-Producing Programs (2006)

The total number of graduates from RN-producing schools in 2006 is 2,372. The numbers of graduates broken out by type of program include 1,245 Associate Degree students, 619 Diploma students and 508 BSN- Generic students.

Figure 2 below depicts the trends in RN graduates from the 1990 to 2006. The total number of graduates reported for 2006 matches the number of graduates in the peak year of 1994. Each type of school’s graduates has similar increases as the total number of RN graduates for each year. The curve for AD graduates closely mirrors the curve for the total number of graduates.

Figure 2. Graduates of AD, Diploma and BSN Schools from 1990 to 2006



Demographic information for graduates of schools that offer AD, Diploma and BSN programs is presented below (see table 5). It is not possible to isolate the race and ethnicity of generic BSN, or AD and Diploma RN to BSN students, because the corresponding schools did not submit program-specific racial and ethnic graduation data. However, the numbers below offer a general picture of the racial and ethnic make-up of the schools that offer these three degrees. Race and ethnicity information for schools that offered the BSN program represent those of all graduates in 2006 including MSN and PhD.

Table 5. Race/Ethnicity of Graduates of RN-Producing Programs in 2006

<i>Program</i>	<i>White</i>	<i>Black</i>	<i>Asian/PI</i>	<i>Hispanic</i>	<i>Native American</i>	<i>More Than 1 Race</i>	<i>Other</i>
AD [^]	60.2%	19.8%	6.4%	10.0%	0.7%	0.09%	2.7%
Diploma [^]	47.0%	18.0%	14.8%	18.9%	0.0%	0.3%	0.9%
BSN Generic *	53.7%	16.6%	14.6%	7.6%	0.2%	0.05%	7.0%

[^] Diploma race/ethnicity totals can include a few LPN graduates

* BSN Generic race/ethnicity totals can include MSN and PhD graduates

VI. Highlights of RN-Enhancing Programs

RN-enhancing students are defined as RN to BSN, MSN, PhD and DNP students. These students do not add to the supply of nurses in the state but rather enhance the education level of nurses already working in New Jersey. As of 2006, the DNP programs were new and there were no DNP graduates and the first graduates are expected in 2009. MSN and PhD students are crucial to the RN education process as these students, once graduated, have the potential to add to the faculty supply.

As stated earlier, there are 11 BSN schools in New Jersey. Each of these 11 schools also offers an RN to BSN degree for students. In addition to these 11 schools, there are five schools that specialize in RN to BSN degrees only, totaling 16 schools that offer this RN to BSN opportunity for students. There are 13 MSN programs (one new), two PhD programs and three schools that offer the DNP degree.

Newly admitted, total enrollments and graduates of RN-enhancing programs statewide are outlined in Table 6 below.

Table 6. Total Newly Admitted, Total Enrollments and Graduates for RN-Enhancing Programs (RN to BSN, MSN, PhD and DNP) in 2006

Program	Newly Admitted	Total Enrollments	Graduates
RN to BSN	610	1975	313
MSN	368	1137	265
PhD in Nursing	22	45	2
DNP	45	44	0
TOTALS	1045	3201	580

It is interesting to note that within the RN to BSN programs, 1,209 of total enrolled students (61% of RN to BSN total enrollments) came from an Associate Degree program to pursue their BSN whereas 766 of total enrolled students (39% of RN to BSN total enrollments) came from Diploma programs to pursue their BSN. Moreover, 99 Associate Degree RNs (32% of RN to BSN graduates) and 12 diploma RNs (4% of RN to BSN graduates) earned their BSN in 2006. Some BSN schools accept more credits of the graduates from AD programs than they do from the graduates of Diploma programs.

Demographic information for graduates of schools that offer RN to BSN and MSN programs is presented below (Table 7). It is not possible to isolate the race and ethnicity of RN to BSN and MSN graduates because the corresponding schools did not submit program-specific racial and ethnic graduation data. However, the numbers below offer a general picture of the racial and ethnic make-up of the schools that offer these two degrees. It is important to note that in some cases, the demographic information can include race and ethnicity of generic BSN graduates. There were only two PhD graduates in 2006, both of whom were White. There have been no graduates of the DNP programs as of yet.

Table 7. Race/Ethnicity of Graduates of RN-BSN and MSN Programs in 2006

<i>Program</i>	<i>White</i>	<i>Black</i>	<i>Asian/PI</i>	<i>Hispanic</i>	<i>Native American</i>	<i>More Than 1 Race</i>	<i>Other</i>
RN to BSN	51%	28.4%	8.5%	5.7%	1.4%	0.03%	5.8%
MSN[^]	52.4%	18.4%	13.9%	6.0%	0.4%	0.0%	8.8%

[^] MSN graduates' race/ethnicity totals can include PhD graduates depending on the school's available programs that produced graduates for 2006

VII. Conclusions

As can be seen in the data presented above, the number of enrolled students pursuing their Associate Degree, Diploma or BSN, although increasing, is increasing at a slower rate than in years past. The growth in enrollments between 2003 and 2004 peaked with a 27.7% increase while the increase between 2005 and 2006 was only 4% (see table 4 for more details). Although the schools have increased their capacity to educate students since 2002, this slowing of the growth in enrollments is cause for concern as the demand for nurses statewide continues to increase. Recent New Jersey Collaborating Center for Nursing research has shown that the decline in enrollments can be directly correlated with a lack of capacity at state nursing schools to accommodate all qualified students.¹

Another cause for concern remains the number of full time equivalent positions that were vacant in New Jersey's Schools of Nursing in 2006 (42 total). Schools also reported that 87 faculty members were expected to retire within the next five years, which will only intensify the number of faculty vacancies. Without an increase in faculty it will impossible to educate the number of qualified students needed to bridge the nursing gap in the state.

Further research will explore this decline in the growth of nursing student enrollments and growing faculty vacancies statewide. These two factors are crucial to the growth and sustainability of the state's nurse workforce if we are to meet the forecasted demand for nurses in New Jersey. However, the Robert Wood Johnson has convened experts in the field to develop a multi-faceted plan to expand the educational capacity of RN schools by providing grants that will increase the number of full time faculty in New Jersey. Together, we can move toward resolving the nurse shortage and meet the need for nurses in New Jersey.

¹ Dickson, G, and Flynn, L. (2005). *New Jersey's Educational Capacity: Impact on the Nursing Supply 2005 Report*. Newark, NJ: NJ Collaborating Center for Nursing. (available at www.njccn.org).