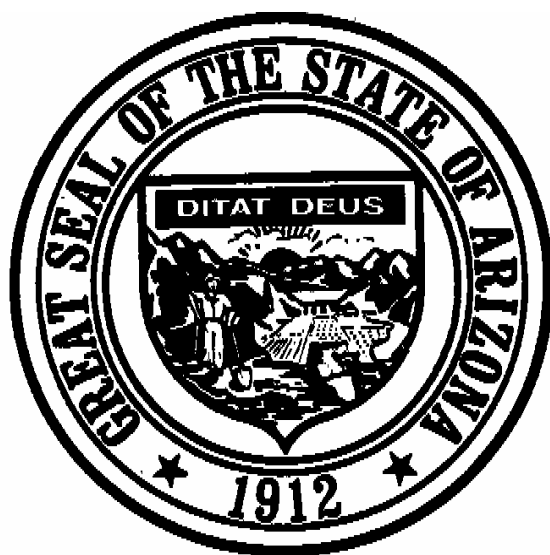


# ARIZONA STATE BOARD OF NURSING

**Janice K. Brewer**  
Governor

**Joey Ridenour**  
Executive Director



**ANNUAL REPORTS FROM  
ARIZONA NURSING EDUCATION  
PROGRAMS  
2008**

**ARIZONA STATE BOARD OF NURSING**

**ANNUAL REPORTS FROM ARIZONA NURSING**  
**EDUCATION PROGRAMS**  
**2008**

by  
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EDUCATION PROGRAMS  
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## INTRODUCTION

The Mission of the Arizona State Board of Nursing is to protect the public health, safety and welfare through the safe and competent practice of nurses and nursing assistants.

### ANNUAL REPORTS DATA

The Arizona State Board of Nursing, (Board), requests an annual report from all Arizona pre-licensure nursing education programs. For the 2003-2008 annual reports, in addition to graduation and admission data, programs were asked about open student placements on the first day of class, faculty, and number of applicants that met qualifications but were not admitted to the semester for which they applied. The number of RN to BSN students and graduates was also requested. Attrition data was requested 2004 through 2008. In 2006-2008 programs were asked to identify students that took longer than 150% of the allotted program time to complete the program. In 2008 programs were asked to identify the faculty to student ratio for didactic classes. The final part of the report contains the program administrator's attestation of compliance with Board education rules (A.A.C. Chapter 4, Title 19, Article 2). The annual reports cover a calendar year from January 1 to December 31.

<b>DEFINITION OF TERMS</b>	
<b>Total Enrollment</b>	The number of students enrolled in a pre-licensure nursing program.
<b>Total Admissions</b>	The number of students registered for the first session of a nursing program, regardless of whether it was fall, spring, or summer.
<b>Students Offered Placement</b>	The number of students offered a placement in a 2007 admission cohort.
<b>Students Registered for the First Clinical Course</b>	The number of students of those offered a placement that actually registered in 2007—same as admissions.
<b>Students Registered Who Did Not Attend</b>	The number of students who registered for the first nursing clinical but never attended classes.
<b>Open Placements in the First Nursing Clinical Course on the First Day of Class</b>	The number of placements that were not filled on the first day of classes; this includes those who registered but did not attend.
<b>Qualified Applicants Not Admitted to the Session for Which They Applied:</b>	Number of applicants who were qualified for admission but were either denied, placed on a wait list, or admitted to a semester other than the one for which they applied.
<b>Advanced Placement Admissions:</b>	The number of students, usually LPNs, admitted to a session, other than the first, of an RN program.
<b>Capacity</b>	The number of student placements available in a nursing program.

<b>Graduates from original cohort</b>	The number of students who graduated at the same time as their admission class.
<b>Repeated or dropped back</b>	Students who took longer time than their admission class to complete a nursing program because they either repeated a course or dropped out for a period.
<b>Attrition</b>	The percent of students from the original cohort who do not complete the program in a specified time-frame.
<b>Faculty</b>	Has the same meaning as R4-19-204—anyone teaching didactic and/or clinical nursing courses regardless of educational preparation.
<b>Readmission</b>	Means anyone who attended a particular nursing program, dropped out for a period and is now requesting a repeat admission into the program. The original cohort of this individual may have already graduated. The readmitted student would be counted as a person who took more than the ideal time to graduate because they are tied to the <b>first</b> admission cohort.
<b>Session</b>	The academic time period for course offerings; usually a semester (13-15 weeks) or quarter (9-10 weeks) but may vary depending on the institution.

**ASSUMPTIONS/EXPLANATORY REMARKS**

The following assumptions and explanations were made in compiling and interpreting the data:

- Practical Nurse (PN) data only applies to traditional PN programs, not multiple exit programs unless indicated in the explanatory comments.
- The number of students “qualified but not admitted” to a program does not represent an unduplicated count. Many, if not most students, particularly in the metropolitan areas of the state, apply to multiple programs simultaneously. In addition a student may qualify for one program, but not qualify for another due to varying admission requirements.
- Number of unfilled placements should not be interpreted to mean that these placements are always available to other qualified students. In some instances, the program is not aware of the vacancy until immediately before the start of classes. At this point in time, the program may not be able to find a student to fill the placement.
- These data apply only to in-state programs approved by the Board.
- The category of associate degree nursing programs also includes one former diploma nursing program, Baptist Health Systems. This program has transitioned to Associate Degree status but is closing after all currently enrolled students graduate.

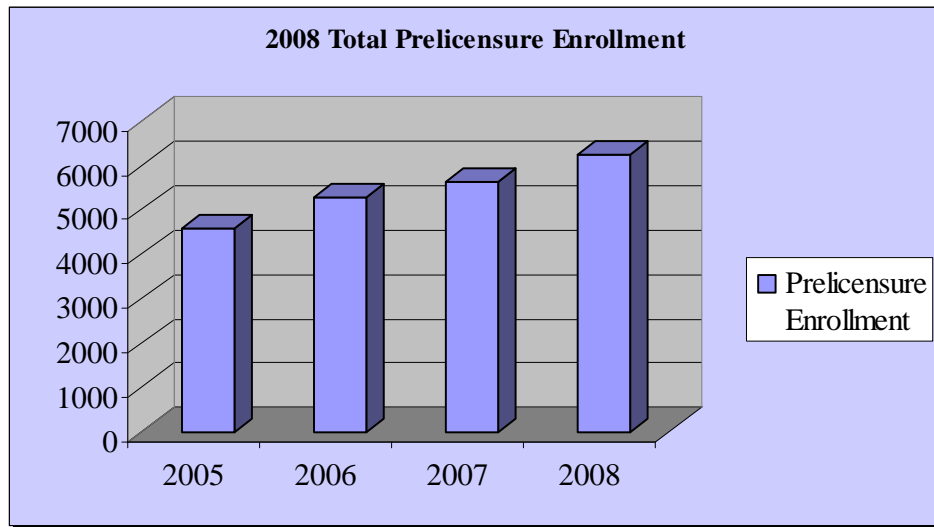
## DATA AND ANALYSIS

All data was entered into an Excel chart and graphic representations were made using Excel, PowerPoint and Microsoft Word. Please contact Pamela Randolph [prandolph@azbn.gov](mailto:prandolph@azbn.gov) for the original data if needed.

### ENROLLMENT

The following figure displays enrollment in all nursing programs (RN/PN and public/private). Overall enrollment has increased each year since 2001. Total nursing program enrollment increased by 10% in 2008. Total nursing program enrollments increased by 120% since 2001 (2820 to 6248). This represents 3428 additional nursing students in all types of nursing programs (LPN and RN).

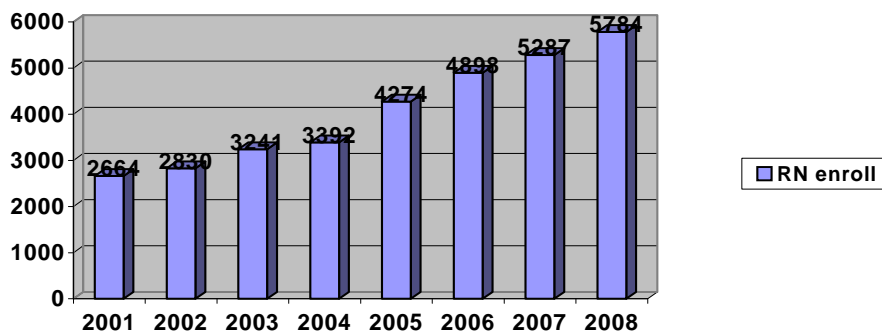
TOTAL PROGRAM ENROLLMENT



### Registered Nurse Program Enrollment

In 2008 RN enrollment increased by 9.4% to 5287 students (additional 497 students). During the since 2001 years RN program enrollment has increased 117% (3120 students). Registered nurse program enrollment gains vary from year to year with increases ranging from a high of 26% in 2005 to a low of 4.7% in 2004.

RN PROGRAM ENROLLMENT

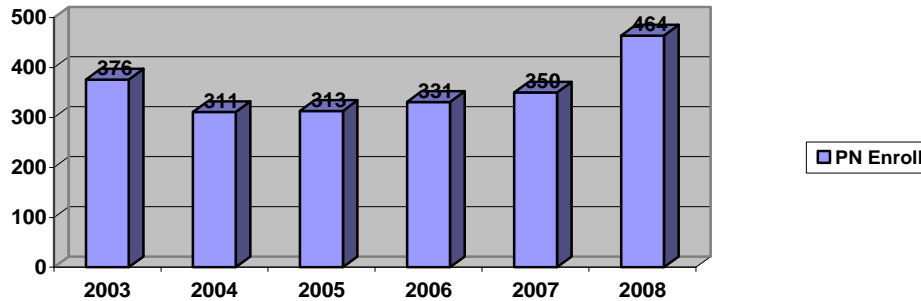


**Practical Nursing Program Enrollments**

Practical nursing (PN) enrollments rose more in 2008 than any time the previous 5 years. In 2008, there was an enrollment increase of 33% for a total of 464 students (114 additional students). Overall, in the past 6 years, PN enrollments have tended to remain static especially when compared to the phenomenal increase in RN enrollments. It will remain to be seen if the increase seen in 2008 is sustained in the coming years or if it is a one-year incidental finding similar to the increase in 2003. If demand for LPN programs remains high, the state should be able to sustain or increase enrollments for the future as most of these programs rely less on public funding than RN programs. There has been interest from some private entities in opening an LPN program in AZ.

Practical nursing program attract students interested in gaining advanced placement admission in an RN program. There appears to be an increased demand for PN programs in 2007, and 2008 as reflected in the number of qualified students who were not admitted (140 in 2007, 213 in 2008).

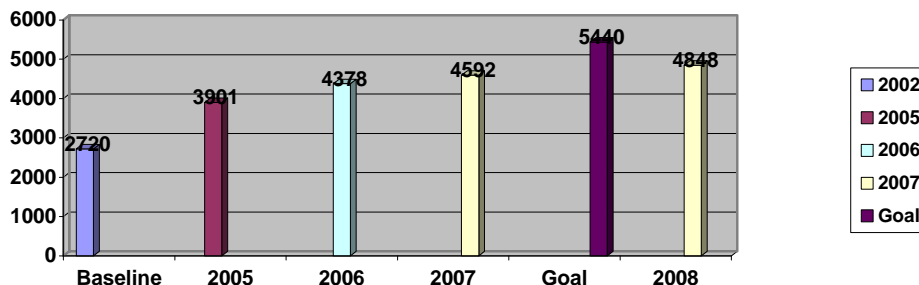
**PRACTICAL NURSING PROGRAM ENROLLMENTS**



**Progress to Goal of Doubling Enrollments in Public RN Programs**

In 2002 the Arizona legislature passed Senate Bill 1260 (SB 1260) entitled “An Act Providing for the Development of the Caregiver and Resource Expansion Program within the Arizona Board of Regents and Community College Districts”. SB 1260 charged public community colleges and universities in Arizona with developing a five-year plan to double the capacity of Arizona RN nursing programs by 2007. For this report, overall enrollments are used as an indicator of program capacity. The baseline capacity in public college and university nursing programs was 2720 students in 2002. To meet the requirements of SB 1260 public programs would have needed to enroll a total of 5440 nursing students by 2007. They failed to quite reach that goal in 2007 and are still 592 students short of the goal in 2008.

**PROGRESS TO GOAL OF DOUBLING RN PUBLIC PROGRAM ENROLLMENT**



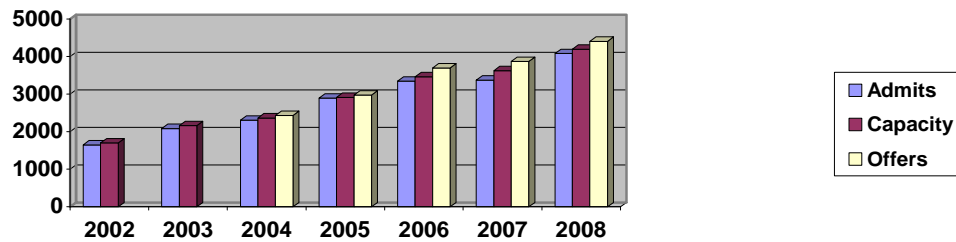
However if private educational institutions that offer nursing programs are included, the gap between actual enrollment and the targeted enrollment narrows. Private schools enrolled 695 RN students in 2007 and 936 RN students in 2008 making a total of 5784 RN students statewide, 344 students above the goal. The largest bulk of private enrollments (538) occurred at private BSN programs: University of Phoenix, Grand Canyon University, and Chamberlain College. Approximately 16% of total RN enrollments are in private schools. Many private programs are new and have not yet graduated substantial numbers of students.

### PROGRAM ADMISSIONS AND CAPACITY

In 2008, admissions into all types of nursing programs increased by 21% (705 students). Since admissions were fairly flat in 2007 this represents a significant 2 year increase. There is an overall increase in admissions of 147% since 2002 (2428 students). For 2004 through 2008, programs were asked to provide data on how many students were offered placements. Placements offered exceeded capacity in all years indicating that programs are over-filling their placements in anticipation that not all students offered a placement will register and attend.

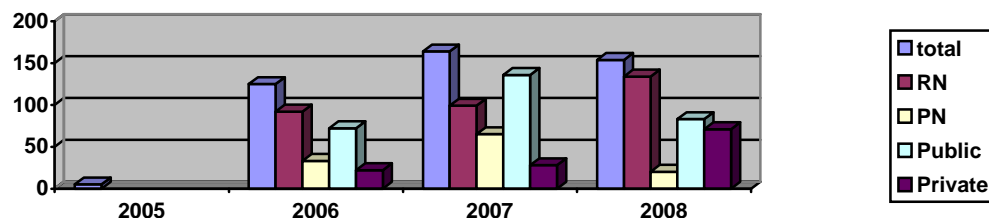
These admission data do not include students admitted to other than the first session of the nursing program, such as LPNs enrolling in the 3<sup>rd</sup> semester of an RN program.

**Total Nursing Program Admissions**



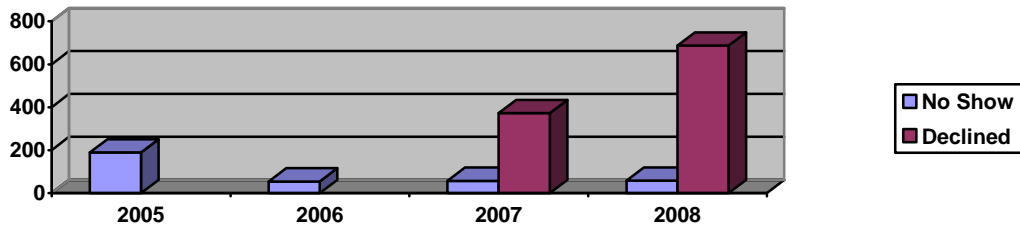
There were 154 unfilled placements in all AZ nursing programs in 2008. Open placements generally occur either from persons who register and do not attend (no shows) or in programs that do not attract sufficient qualified candidates to fill their projected enrollments. Of the unfilled placements, 134 were in RN programs and 20 in PN programs. The majority of unfilled placements for RN programs in 2008 were in the private sector (71 of 134). Newer programs in this sector did not admit to capacity and consequently did not generate a wait list. The unfilled placements are slightly less than last year and considerably less than the 5 that were reported in 2005.

**Unfilled Placements**



The number of students who registered for the first semester of a nursing course and did not attend (no show) was measured for the first time at 2005 at 189. In 2006 this number decreased to 54, and stabilized in 2007 and 2008 (57 and 58). These “no shows” represent approximately one-third of the unfilled placements in 2008 and typically occur suddenly, without sufficient time for placement of “wait-listed” students. The Board has also been informed that many prospective students decline a late placement yet remain on the “wait list”. In 2008, 687 students declined placement in a nursing program. This is nearly double the declined placements in 2007. Reasons for declining include: changing to another field, acceptance into another nursing program, only able to attend a week-end or evening program, or insufficient notice to attend at the time of the offered placement.

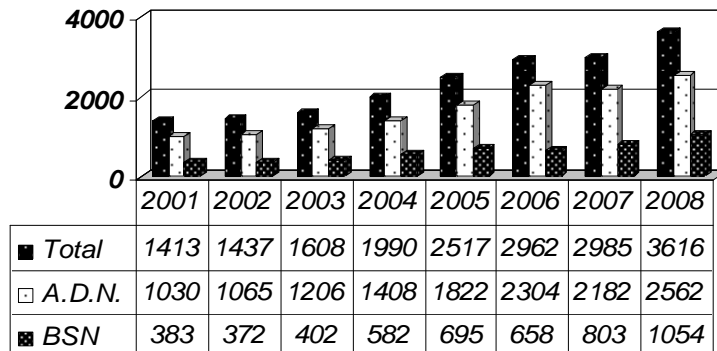
Potential Students who Declined or Failed to Attend



**Registered Nursing Program Admissions**

Registered nursing program admissions to the first semester of a nursing program were totaled and classified by type of program (Associate Degree/Baccalaureate). Total RN program admissions increased in 2008 by 631 students (21%). Since 2001, total RN programs admissions increased by 156% (an additional 2203 students). Baccalaureate (BSN) program admissions increased by 31% in 2008 (251 students) and since 2001, have increased admissions by 175% (an additional 671 students). Associate degree program admissions increased by 17% (380 students in 2008) and increased by 149% between 2001 and 2008 (an additional 1532 students). BSN admissions accounted for 29% of total admissions in 2008. The level of admissions to public BSN and AD nursing programs may not be sustainable into 2009-2010 due to budget and funding cuts. It remains to be seen whether prospective students choose to attend private schools with higher tuition costs that have openings or elect to remain in an admission queue.

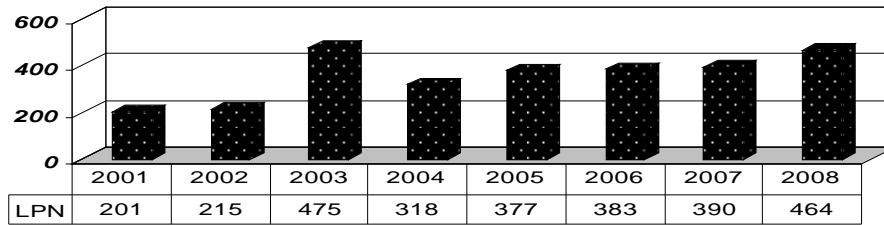
**Associate and Baccalaureate Admissions**



**Practical Nursing Program Admissions**

Practical nursing program admissions increased by 19% in 2008 (74 students). There seems to be a high demand for two particular programs who between them, had to turn away 213 qualified students (GateWay Fast Track and Southwest Skill Center). There were fewer open placements on the first day of class in LPN programs (20). Demand for LPN programs appears increased in 2008 but admissions are still short of 2003 admissions.

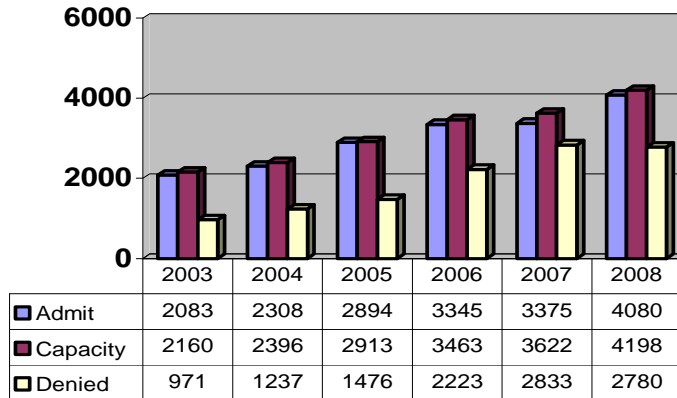
**PN PROGRAM ADMISSIONS**



**QUALIFYING APPLICATIONS DENIED/DEFERRED**

The number of students admitted was compared with the number of qualified applications that nursing programs denied or deferred for the semester or session that the applicant requested. In 2008 there were 2780 nursing program applications that were not accepted or deferred due to insufficient openings in the program. Although the change is insignificant, this is the first time in the past 6 years that this number has actually decreased. Ninety-three percent (2567) of these applications were for RN programs. Of the all applications, 1839 (66% of the total pool) were submitted to the Maricopa District Nursing Program. Some programs, such as Maricopa, place qualified applicants in a queue guaranteeing admission based on program preference and application submission date. Pima Community College in Tucson only accepts applications for future semester admissions, therefore all qualified students are admitted to the semester in which they apply although that semester may be a year or 18 months in the future. Some prospective students elect to remain in the queue for a specific program offering, such as part-time night program. Due to differing admission standards, a student may qualify for admission in one program and not qualify for admission in another program. Many students also apply to multiple programs simultaneously. Taking into consideration the above factors, the number of qualified applications reported as denied/deferred is most certainly only an estimate of the number of actual students who were denied/deferred. It appears that there is still high demand for nursing programs and a large pool of potential applicants who apply to public RN programs.

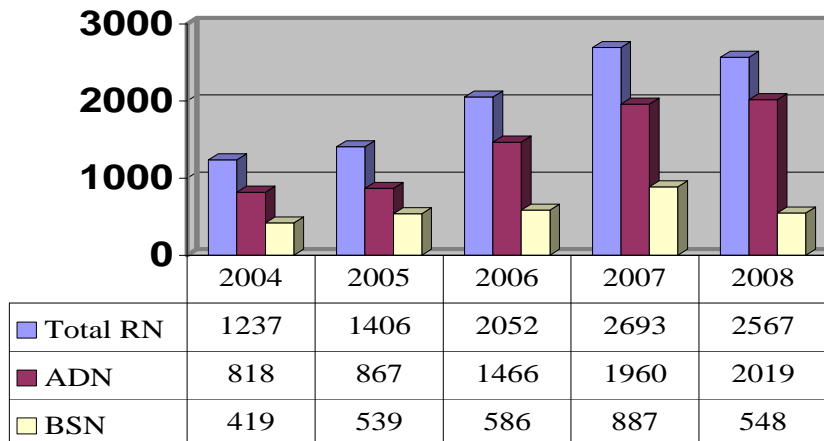
**ALL PROGRAMS  
CAPACITY / ADMITS / QUALIFIED NOT ADMITTED  
2003 – 2006**



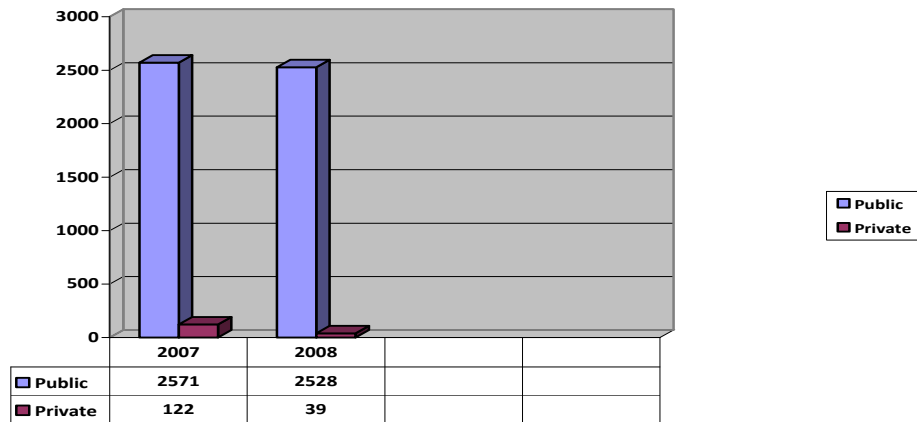
**RN Programs**

For RN programs, there were 2567 qualified applicants who were not admitted to the semester for which they applied. Programs with the largest number of qualified applicants that were not admitted were the Maricopa Community College District Nursing Program (1839), Arizona State University (275), University of Arizona (142) and Northern Arizona University (119). It is interesting to note that other than the MCCDNP program, demand remains highest for baccalaureate programs. Most likely due to the arrival of a new BSN program in AZ, there is a decrease in applicants turned away from Baccalaureate programs with a slight non-significant increase in applicants turned away from an associate degree program. A small percentage of RN applications (1.5%, 39 applications) were denied/deferred by three of nine approved private RN nursing programs in AZ: Grand Canyon University (12) Pima Medical Institute--Mesa (13) and Apollo College (14).

**RN APPLICATIONS NOT ACCEPTED**

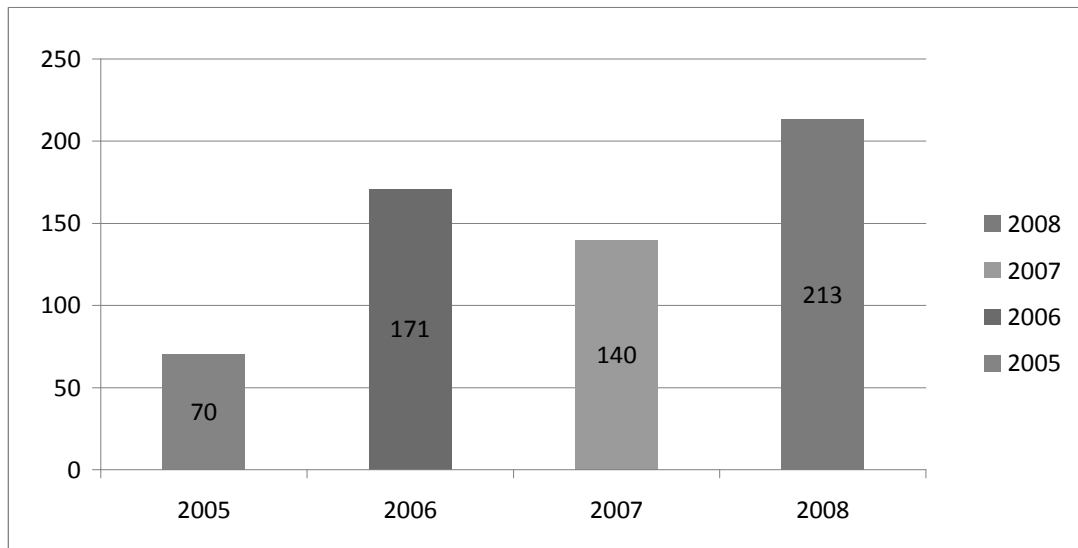


**Qualified RN Applicants Not Admitted  
Public vs. Private**



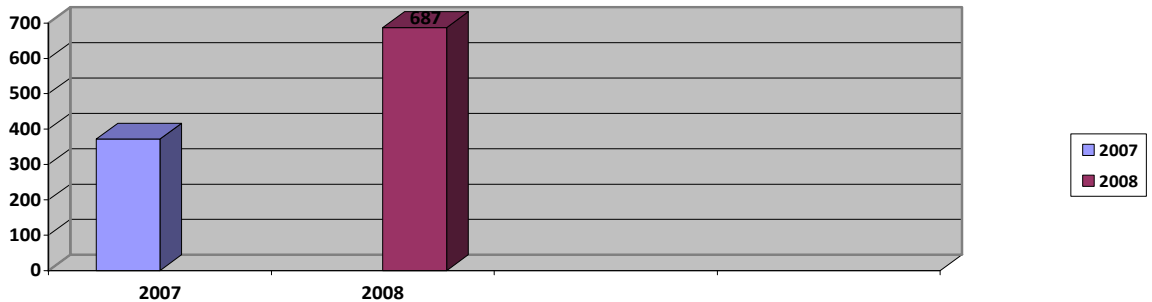
**PN Programs**

There were 213 qualified applicants that were not admitted to a practical nursing program in 2008, an increase of 73 applicants from the 140 that were not admitted in 2007. Estrella Mountain Community College/SouthWest Skill Center had the largest number of applicants in this category with 197; GateWay Fast Track Program had 16. Prior to 2005, no qualified applicants who applied to a PN program were denied admission.



**Students Who Declined Placement.**

In 2008, 687 students declined placement in a nursing program. This is nearly double the declined placements in 2007. This is equivalent to 25% of the "queue" or waiting list. Despite declining a placement, many of these students still remain in the "queue" or on a waiting list.

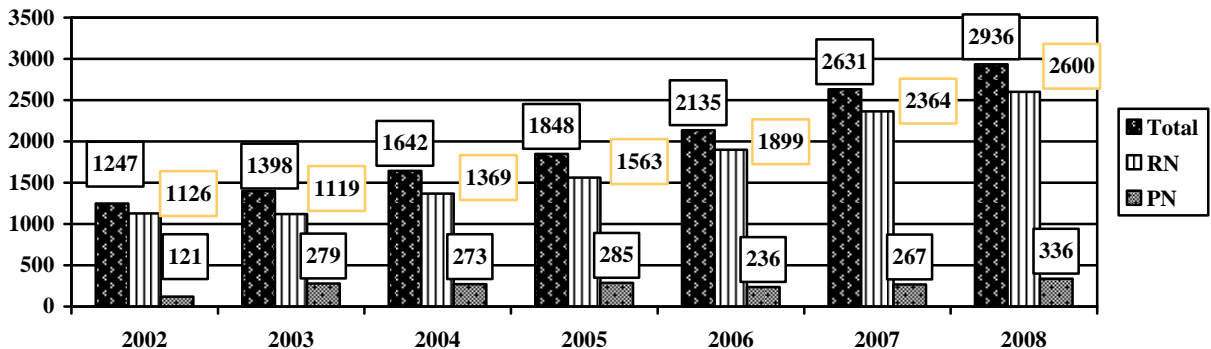


**PROGRAM GRADUATES**

**Total Graduates**

In 2008 there was a 12% increase in graduates from all nursing programs (305 students). There was a 10% increase in RN graduates (236 students) and a 26% increase in PN graduates (69 students).

**TOTAL GRADUATES IN ALL PROGRAMS**

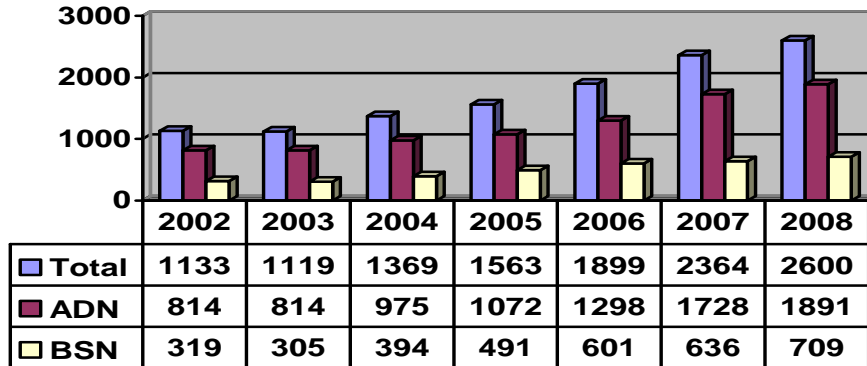


**RN Programs**

There was a 10% increase in RN graduates in 2008 with increases in both associate and baccalaureate degree graduates. Associate degree graduates increased by 9% and baccalaureate graduates increased by 11%. Limits to growth include shortages of faculty and clinical placements for students. There was a 129% increase in graduates from RN programs between 2002 (1133) and 2008 (2600).

Twenty-seven percent of RN graduates earned a BSN in 2008 which is identical to the proportion of BSN/A.D. graduates in 2007 but less than in 2005 and 2006. This may be due to the more rapid effects of expansion in a 2 year program versus a 4 year program and the addition

of new associate degree nursing programs. Nationally, BSNs accounted for 38% of RN first-time test takers (NCLEX Reports – 2008). Some experts suggest that the ideal mix of bachelors degree prepared nurses to associate degree prepared nurses is 60/40 (Aiken). The National Advisory Council on Nurse Education and Practice (NACNEP), policy advisors to Congress and the US Secretary for Health and Human Services on nursing issues, has urged that at least two-thirds of the nursing workforce hold baccalaureate or higher degrees in nursing by 2010 (AACN, 2007).

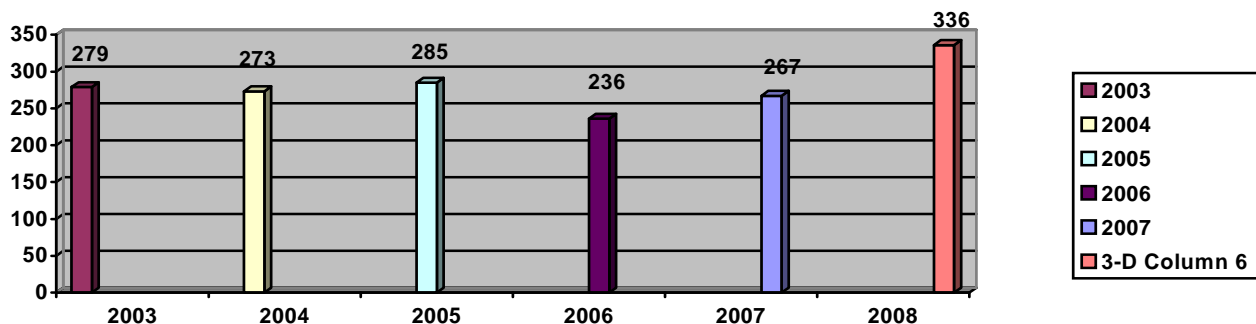


### Characteristics of RN Graduates

Eighty-eight percent of RN graduates finished in the time allotted for their program. Twelve percent (316) of the graduates took extra time to finish the program with only 27 students (1%) taking more than 150% of the allotted program time. This is a slight increase in on-time graduates from 2007. The proportion of graduates who finished on time has fluctuated between 77-87 percent since 2004 with all years except 2004 being 85% or above. In comparing graduate data with attrition, the 88% of the class of 2008 who graduated on-time, represent 71% of the potential on-time graduates based on numbers of students admitted to these cohorts (see attrition section).

### PN Graduates

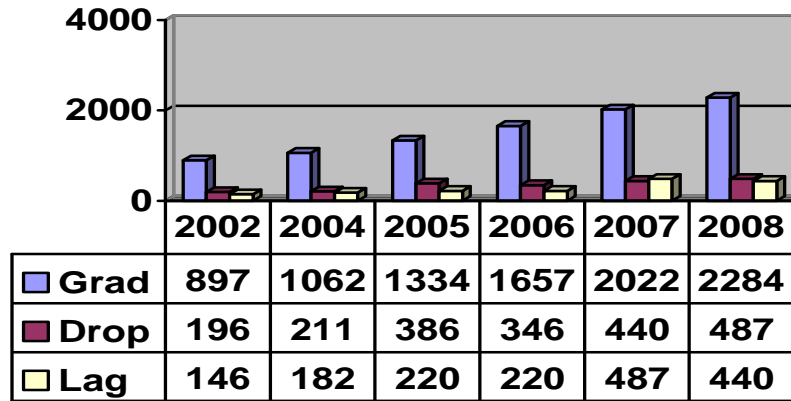
There was a 26% increase in PN graduates in 2008. Most graduates completed on time; only 43 (14%) took longer with none exceeding 150% of the allotted time. Those who graduated on time represent 71% of the total admission of students with the potential to graduate in 2008.



**Attrition – RN Programs**

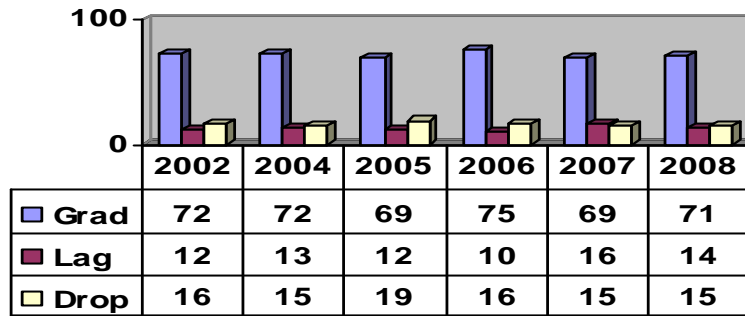
In 2008, 71% of students admitted to RN programs graduated on schedule. Fourteen percent are still enrolled, and 15% dropped out of the program. This is consistent with previous years as can be seen from the two charts below. The 2008 RN graduating cohorts consisted of 2284 students who finished their program on time.

**RN Attrition Number of Students and Category**



**RN Student Attrition by Percent**

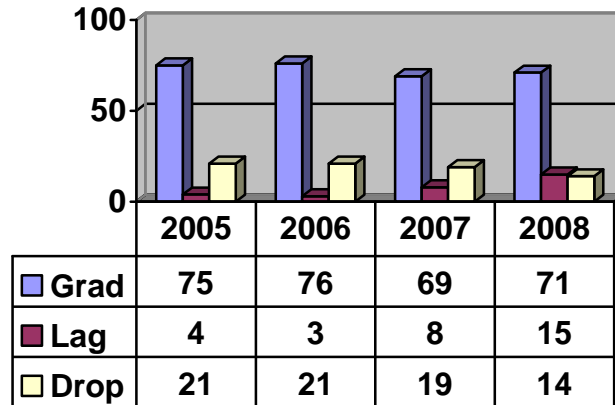
Cohorts--Percent who graduated on time/lagged/or dropped



**Attrition—PN Programs**

In 2008 71% of the PN students (293 students) finished the program in the optimal amount of time. This has varied little in the past 4 years. However, in past years it appeared that a greater proportion of PN students drop the program as compared to RN students. In 2008 the proportion is closer to that of RN programs.

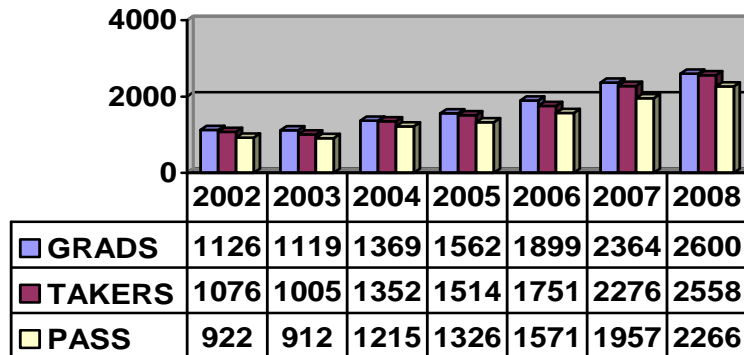
**Percent of PN students who graduated  
on time/lagged/or dropped**



**NCLEX ® RN Exam**

In comparing takers and passers of the National Council Licensure Examination for Registered Nurses (NCLEX-RN), there were 12% more takers in 2008 than in 2007, and 16% more passers on the first try. The overall pass rate in Arizona for NCLEX-RN was 85.58% in 2008. The passing rate is somewhat lower than in 2007 and may still reflect the increase in the passing standard in April 2007. In comparing exam statistics with program graduate statistics, the number of students graduating in any year may differ from the number of NCLEX takers as students graduating in December do not take NCLEX until the following year. There are very few graduates who do not take the NCLEX exam.

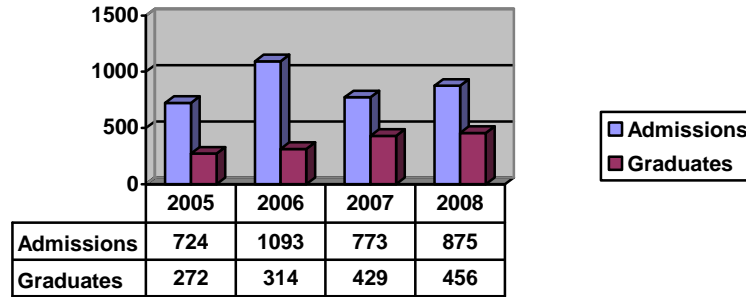
**2002-2008 NCLEX RN**



**RN to BSN Program Admissions**

Arizona programs submitted information on admissions to BSN completion programs. Eight hundred seventy-five RN to BSN students were admitted in 2008, a 13% increase from 2007 but still a decrease from the 1093 students admitted in 2006. Two programs accounted for most of the admissions: Grand Canyon University at 450 and University of Phoenix at 258 students. Chamberlain College will offer an RN to BSN program in the future.

**RN to BSN Admissions and Graduates**



**Graduates – RN to BSN**

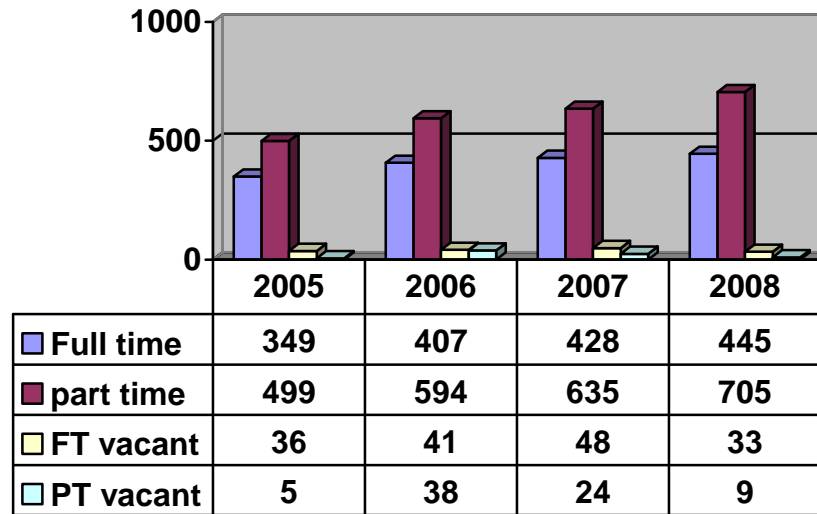
Graduates of RN to BSN programs increased from 126 in 2004 to 456 in 2008, a 262% increase in 4 years. This significant increase in RN to BSN enrollments and graduates appears to be sustainable and should have a favorable effect on the mix of associate degree graduates to baccalaureate degree nurses in Arizona. However it appears that approximately twice as many RN to BSN students are admitted than graduate the next year. Perhaps limited time for coursework on the part of working RN students and prolongation of the program through part time study can explain this trend although no data on attrition on these programs has been collected. Twenty-nine RN to MSN students were enrolled in 2008.

**NURSING PROGRAM FACULTY**

At the time of data measurement, there were 445 full time faculty in 2008 as compared to 428 in 2007 (4% increase). Initially there appeared to be a significant decrease in part time faculty from 938 in 2007 to 705 in 2008 (33% decrease). However in examining the data, it was discovered that faculty information for one program with both a national and local presence were recorded and reported inconsistently over the years by both the program and Board staff. Board staff recorded 384 part-time faculty in this program in 2007 failing to note that the program had actually provided all faculty, not just AZ faculty as has been provided in the past. In 2008, the program reported 69 part-time AZ faculty, which is consistent with part-time faculty numbers reported in 2005-2006 (range 64-74). Therefore the 2007 report indicating an over 50% increase in part-time faculty in AZ programs was due to reporting/recording artifact and not an actual increase within AZ. When recording only the AZ faculty, there was actually a 7% increase in part-time faculty in 2007 as reflected in the revised chart below. While concerns about part-time to full time faculty ratio remain with a ratio of 1.6 part-time to full-time faculty members, they are not of the magnitude originally believed. Adjusting the 2007 numbers to reflect only AZ faculty, part-time faculty increased 11% in 2008 consistent with enrollment increases of 10%. The reporting instrument and instructions will be revised to improve clarity in this section.

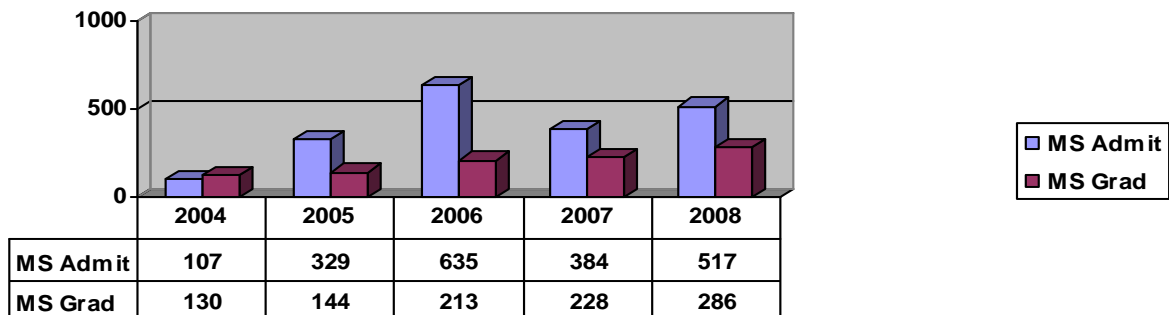
There were fewer full time vacancies in 2008 (33 vs. 48) than in 2007. There were 9 unfilled part-time positions in 2008 as opposed to 24 part-time openings in 2007. In 2008 programs appear to have had better success in recruiting both part-time and full-time faculty. Programs report anecdotally that increases in salary, better orientation and increased support has helped them recruit and retain part-time faculty. For the first time, programs were asked to provide their average faculty-to-student ratio in didactic courses. Ratios ranged from a high of 1:43 at Mohave Community College to 1: 12 at Pima Community College CTD. The average ratio was 1:24.

### Filled Faculty Positions and Vacancies by Year



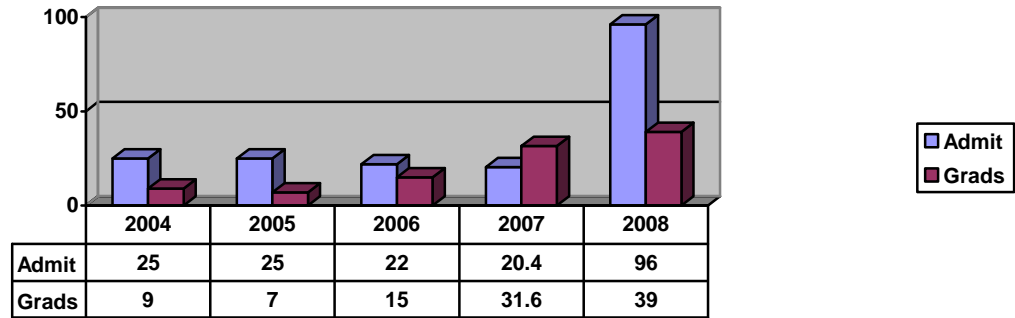
### GRADUATE NURSING EDUCATION

The Board has been gathering statistics on advanced practice admissions and graduations but has previously not included them in this report. Interest has been expressed in trending graduate program students and graduates. Admissions to master's in nursing programs peaked in 2006 and have more than quadrupled since 2004. Similarly, graduates of master's in nursing programs have more than doubled since 2004. Attrition appears high for graduate programs.



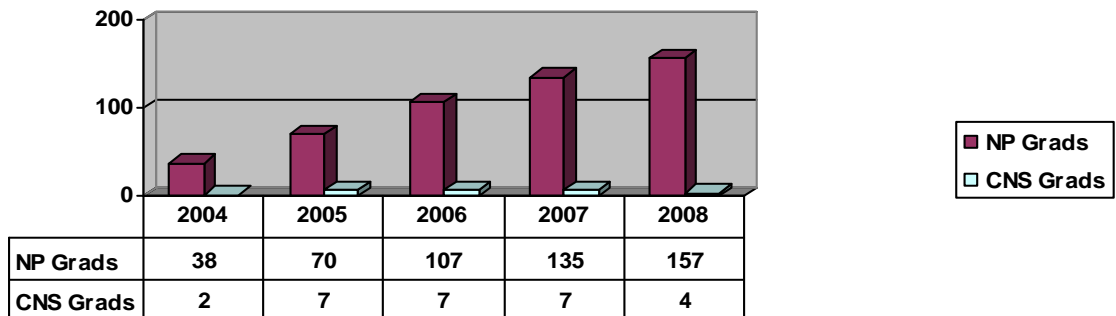
**Doctoral Admissions and Graduates**

Two AZ nursing programs admit doctoral students: Arizona State University and University of Arizona. Arizona State started admitting in 2005 but admissions did not significantly increase until the implementation of the doctor in nursing practice (DNP) program in 2008. Twenty-five of the 39 graduates of doctoral programs in 2008 received the DNP.



**Advanced Practice Graduates**

Although programs continue to offer graduate education in the clinical nurse specialist (CNS) category, very few students choose this option. CNS graduates have numbered less than 10 each year while graduates of nurse practitioner programs quadrupled from 38 in 2004 to 157 in 2008.



## **SUMMARY**

The systematic and routine collection of nursing program data will assist the Board, nursing programs, nurses, and the public in understanding nursing education enrollment trends and in setting realistic goals. Registered nursing program enrollments, graduates, and NCLEX takers increased in 2008 due to both expansion of existing programs and the establishment of new programs. There continues to be a large number of potential nursing students either waiting to enter programs or being denied admission. For the first time since measurement, the number of applications denied/deferred has stabilized. RN to BSN and MSN graduates continue to represent approximately 50% of admissions. There is a growing trend to enroll and obtain the doctorate of nursing practice degree. The need for sustained and continued growth of the RN workforce in Arizona is well documented. Cooperation and dedication of resources from government, education, and service will be required to support the education of a sufficient number of new nurses and nurses with advanced degrees to meet state and national health care needs.

## REFERENCES

American Association of Colleges of Nursing (2007). Fact sheet: the impact of education on nursing practice. Available at: <http://www.aacn.nhc.edu/EdImpact/index.htm>.

Aiken, L., Clarke, S., Cheung, R., Sloane, D., Silber, J., *Educational Levels of Hospital Nurses and Surgical Patient Mortality*. *JAMA*. Volume 290, No. 12, September 24, 2003.

National Council of State Boards of Nursing. *NCLEX Quarterly Reports*. Available from Arizona State Board of Nursing, 4747 N 7<sup>th</sup> St, STE 200, Phoenix, Arizona 85014.

National Council of State Boards of Nursing (NCSBN). *A National Survey on Elements of Nursing Education*, July 2006