Faculty Shortages in Baccalaureate and Graduate Nursing Programs: Scope of the Problem and Strategies for Expanding the Supply

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The AACN Mission

The American Association of Colleges of Nursing (AACN) is the national voice for university and four-year college education programs in nursing. Representing 592 member schools of nursing at public and private institutions nationwide, AACN's educational, research, governmental advocacy, data collection, publications, and other programs work to establish quality standards for bachelor's- and graduate-degree nursing education, assist deans and directors to implement those standards, influence the nursing profession to improve health care, and promote public support of baccalaureate and graduate nursing education, research, and practice.

Task forces are appointed by the AACN Board of Directors as issues arise that require study and action. This white paper was prepared by the AACN Task Force on Future Faculty.

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The American Association of Colleges of Nursing (AACN) recognizes that the shortage of faculty in schools of nursing with baccalaureate and graduate programs is a continuing and expanding problem. Over the past several years, the deficit of faculty has reached critical proportions as the current faculty workforce rapidly advances toward retirement and the pool of younger replacement faculty decreases. The purpose of this white paper is to summarize the scope of the problem, discuss issues contributing to the shortage of faculty, and put forth strategies for expanding the capacity of the current and future pool of nursing faculty.

Section I. Scope and Significance of the Problem

The United States is in the midst of an unprecedented shortage of registered nurses. This shortage is expected to persist because of the increasing demand for health care as baby boomers approach retirement; the aging nursing workforce; and the decline of interest in nursing as a career because of expanding opportunities for women in previously male-dominant professions (Staiger, Auerbach, & Buerhaus, 2000).

According to projections from the Bureau of Labor Statistics (BLS), there will be more than *one million* vacant positions for registered nurses (RNs) by 2010 due to growth in demand for nursing care and net replacements due to retirement (Hecker, 2001). Data from the 2000 National Sample Survey of Registered Nurses estimated that 39 percent of RNs employed in nursing held baccalaureate or master's degrees in nursing (Spratley, Johnson, Sochalski, *et al*., 2001). Therefore, one can postulate that *at least* 390,000 of the vacancies projected by the BLS will be for RNs with baccalaureate or master's nursing degrees, which translates into the need for large numbers of well-prepared faculty to educate these new nurses. In addition, U.S. high schools will graduate the largest class in history in 2007-2008—a projected 3.2 million graduates (Western Interstate Commission for Higher Education, 1998). Even if enrollment demand in nursing increases only modestly, *will sufficient numbers of nursing faculty be available to teach these students*?

Intensifying the overall nursing shortage is the increasing deficit of full-time master's and doctorally prepared nursing faculty. Unfortunately, the shortage of faculty is contributing to the current nursing shortage by limiting the number of students admitted to nursing programs. In 2004, an AACN survey determined that 32,797 qualified applications to baccalaureate, master's, and doctoral programs were not accepted; and an insufficient number of faculty was cited by 47.8 percent of responding schools as the major reason for not accepting all qualified applicants (Berlin, Wilsey, & Bednash, 2005a).

A special survey was conducted by AACN in 2004 to determine the vacancy rate for faculty. In a national sample of 395 schools (68.6% of AACN-member institutions), there were 8,907 budgeted full-time faculty positions. Of these positions, 717 (8.1%) were vacant. One hundred twenty-two schools did not have any vacancies but needed additional faculty; and only 30 schools without vacancies reported that no additional faculty members were needed. The mean number of vacancies per school was 2.9 with a range of 1-15 (AACN, 2004). Other studies corroborate these findings. A California

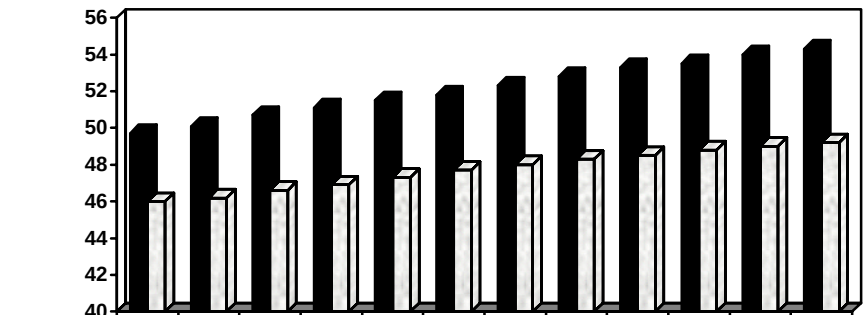
study identified the need for 163 FTE faculty or 9.2 percent of the total statewide baccalaureate and higher degree program faculty by 2003; and a North Carolina study found vacancy rates of 10 percent for diploma, associate degree, and baccalaureate programs (California Strategic Planning Committee for Nursing, 2001; Lacey & Shaver, 2001). In addition, a southeast regional study found vacancy rates of 5.7 percent for associate degree, baccalaureate, and graduate programs at the beginning of the 2000-2001 school year; and a Massachusetts study found a vacancy rate of 6 percent in baccalaureate programs (Council on Collegiate Education for Nursing, 2002; Sroczynski, 2003). To the casual observer, vacancy rates of less than 10 percent may not seem significant, but even one or two vacant positions in a school can have a considerable impact on the didactic and clinical teaching workload of the remaining faculty.

Section II. Factors Contributing to the Shortage of Faculty

A. Faculty Age

Although there are multiple factors contributing to the shortage of faculty, the impact of faculty age and retirement timelines coupled with an inadequate pool of younger faculty for replacement are the primary influences on future faculty availability. AACN conducts a survey of faculty in baccalaureate and higher degree granting schools of nursing each fall. In 2004, surveys were sent to 687 schools. The 575 (83.7%) responding institutions reported 10,967 full-time nurse faculty. The proportion of doctoral and master's prepared faculty was 47.9 and 52.1 percent, respectively. Of those with doctoral degrees, 61.5 percent held doctorates in nursing, whereas 38.5 percent had degrees in other fields (Berlin, Wilsey, & Bednash, 2005b). Like the overall nursing workforce, mean age has increased steadily, from 49.7 years in 1993 to 54.3 in 2004 for doctoral faculty and 46 to 49.2 for master's faculty (Figure 1; AACN, 1993-2004).

Figure 1. Mean age of full-time nurse faculty, 1993-2004.



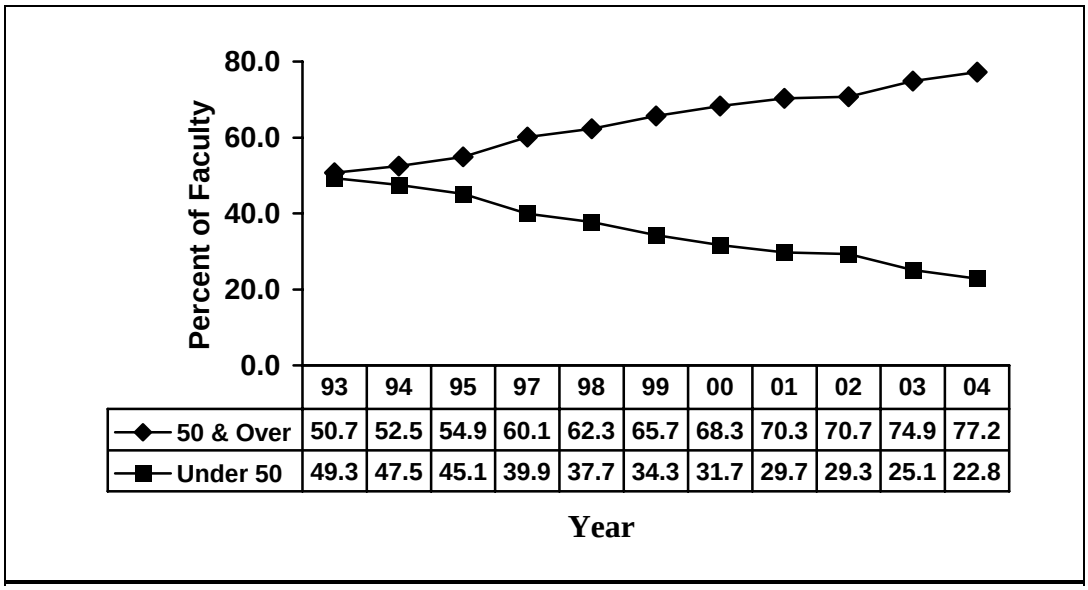
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Doctoral	49.7	50.1	50.7	51.1	51.5	51.8	52.3	52.8	53.3	53.5	54.0	54.3
Master's	46.0	46.2	46.6	46.9	47.3	47.7	48.0	48.3	48.5	48.8	49.0	49.2

Age data not collected in 1996; midpoint of ’95 and ’97 used.
Source: American Association of Colleges of Nursing, 1993-2004 © 2005.

Faculty Retirement Projections. Regression analysis of faculty 62 years and younger found that the mean age was increasing at almost half a year per year (0.43) for full-time doctorally prepared faculty. Retirement projections for individuals who were faculty in 2001 revealed that *from 2004 through 2012, between 200 and 300 doctorally-prepared faculty will be eligible for retirement annually*. The modal year of retirement is 2009 (Berlin & Sechrist 2002a). The mean age for the 2001 full-time master's faculty cohort was increasing a third of a year per year (0.33), and *from 2012 through 2018 between 220 and 280 master's faculty will be eligible to retire each year;* the modal retirement year is 2015 (Berlin & Sechrist, 2002b). These projections represent the best case scenario, based on the conservative assumptions that faculty will work until age 62 and that there will be no additional departures from academic life.

2. Faculty Age Groups. In conjunction with the increase in mean age, the proportion of full-time doctorally-prepared faculty age 50 and over and under 50 has changed dramatically. In 1993, the proportion of faculty under and over age 50 was almost equal; in 2004 the percentage of those 50 and over increased by 26.5 percent (Berlin & Sechrist, 2002a, 2005a). Full-time master's faculty 50 and over increased from 32.6 to 53.2 percent during the same time period (Berlin & Sechrist, 2002a, 2005b).

Figure 2. Percent of full-time doctorally prepared faculty over and under the age of 50 for each reporting year, 1993-2004.



	93	94	95	97	98	99	00	01	02	03	04
50 & Over	50.7	52.5	54.9	60.1	62.3	65.7	68.3	70.3	70.7	74.9	77.2
Under 50	49.3	47.5	45.1	39.9	37.7	34.3	31.7	29.7	29.3	25.1	22.8

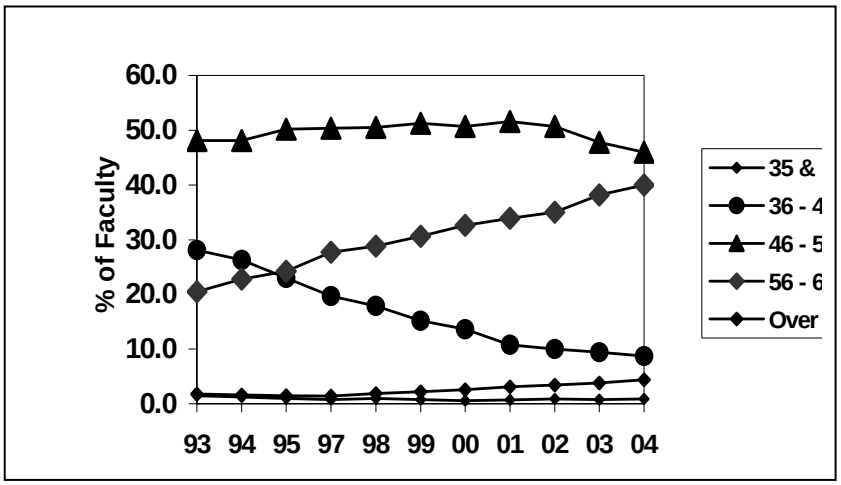
Source: Berlin & Sechrist, 2002a, 2005b.

B. Departure from Academic Life

1. Decline in Percent of Younger Faculty. Between 1993 and 2004, the percentage of doctorally prepared faculty members in the age categories of 56-65, and over 65 years increased by 19.5 and 2.6 percent, respectively. In contrast, there were decreases in the age groups 35 years and younger (0.6%), 36-45 years (19.4%), and 46-55 years (2.1%) (Figure 3; Berlin & Sechrist, 2002a, 2005c). The decline in the 36-45 group of doctorally prepared faculty is particularly troublesome, given that "the doctoral degree should be

considered the appropriate and desired credential for a career as a nurse educator" (AACN, 1996, p. 3). Advancement to the next age category accounts for some of the decline, but egression from academic life is the major reason for the loss of younger faculty members. Master's prepared faculty in the 36-45 year group showed the same pattern of decline (Berlin & Sechrist, 2005d).

Figure 3. Percent of doctorally prepared full-time faculty in each age category, 1993-2004.



Source: Berlin & Sechrist, 2002a, 2005c.

In the 280 schools reporting faculty resignation and retirement data in 2002, 188 full-time doctorally prepared faculty and 202 master's prepared faculty resigned from schools of nursing. Nineteen individuals with doctoral preparation and 62 with master's preparation were between the ages of 36 and 45 years of age. Of those, subsequent employment plans were reported for 16 doctoral and 58 master's resignees. Although over one-half (56.2%) of those with doctoral degrees left to take other school of nursing faculty or administrative positions, seven individuals (43.8%) left academia to assume non-academic positions such as nursing service, private sector, or private practice positions. Forty-three percent (25 individuals) of those with master's preparation resigned to take non-academic jobs (AACN, 2002b).

2. Employment of Doctoral Graduates. Of the 412 doctoral graduates in 2003-2004, post-graduation plans were reported for 307 (78.0%) graduates. Twenty-two percent (22.5%) reported employment commitments in settings other than schools of nursing (AACN, 2005a). This finding is confirmed by data from two additional sources. Data from the Survey of Earned Doctorates indicated that the percent of nursing doctoral recipients planning to be employed in areas other than education increased steadily from 15.5 percent in the time period 1980 through 1984 to 26.9 percent from 1995-1999. Further, teaching as a primary employment activity decreased from 70.8 percent to 59.5 percent during the same two time periods (National Opinion Research Center, 2001). The National Sample Survey of Registered Nurses databases estimated that in 1992, 1996, and 2000 the proportion of nurses with nursing doctorates who were employed in schools of nursing with baccalaureate and higher degrees showed steady declines, going from 68 percent in 1992 to 49 percent in 2000 (Division of Nursing, 2001).

C. Salary Differentials

Salary is an influential factor in the employment decisions of those completing graduate education. In a comparison of responsibilities and salaries associated with various employment opportunities, faculty positions may not be as appealing as other offers. Average salaries for clinical positions have risen more than those for faculty positions because most universities are constrained in their ability to increase faculty salaries (Brendtro & Hegge, 2000; AACN, 1999a). Academic institutions, especially those faced with budget cuts, generally cannot compete with nonacademic employers.

In fall 2004, the median calendar-year salaries for instructional faculty with doctoral degrees with the ranks of associate and assistant professors were $77,605 and $73,333 respectively; for those with master's degrees the median salaries were $62,778 and $58,567 (Berlin, Wilsey, & Bednash, 2005b). A sample of clinical and administrative nursing salaries is presented in Table 1 (Salary.Com, 2005). Since the clinical and administrative salaries are based on a calendar year, academic salaries were converted to calendar year also. (Academic salaries are multiplied by 11/9 or 1.22 for this conversion).

Table 1. Comparison of full-time, calendar year instructional nurse faculty salaries and selected non-academic base salaries, 2004-2005, all US.

School of Nursing Instructional Faculty Positions:	**Median**	**75th Percentile**
Associate Professor (Doctoral)	$77,605	$84,839
Associate Professor (Master's)	$62,778	$70,424
Assistant Professor (Doctoral)	$68,444	$73,333
Assistant Professor (Master's)	$58,567	$64,590
School of Nursing Administrative Faculty Positions:		
Director[1] of baccalaureate or master's program		
Associate Professor (Doctoral)	$85,536	$94,265
Associate Professor (Master's)	$71,385	$79,766
Assistant Professor (Doctoral)	$73,359	$79,977
Assistant Professor (Master's)	$69,967	$81,978
Dean[2] of nursing program		
(Doctoral)	$95,647	$123,600
(Master's)	$67,222	$ 80,000
Clinical/Administrative Positions:		
Chief Nurse Anesthetist	$137,979	$151,697
Head of Nursing (Exec. & Management)	$157,754	$182,871
Nurse Anesthetist	$121,698	$131,076
Nursing Director	$104,191	$117,059
NP (Specialty Care)	$ 74,015	$ 81,487
Certified Nurse Midwife	$ 78,565	$ 83,728
Head Nurse (Critical Care)	$ 73,640	$ 81,098
Clinical Nurse Specialist	$ 71,544	$ 76,811

Sources: Berlin, L.E., Wilsey, S., & Bednash, G.D. (2005b); Salary.Com (April 2005); and Berlin, L.E. (2005) unpublished data (deans' salaries, all US).

[1] The term director refers to an administrative faculty member who is responsible for a program within the school of nursing, not the dean.

[2] The term dean refers to the chief executive officer of a school of nursing and encompasses titles such as director, chair, head, and coordinator.

Salary may also be a determinant in the decision of master's prepared nurses to return to doctoral study. Potential students calculate whether it profits them to seek doctoral study and enter academia when they can earn better salaries in non-academic master's-level positions.

D. Tuition and Loan Burden for Graduate Study

Average tuition, required fees, room/board, and percent of loan burden for graduate students by type of institution are presented in Table 2 (Peterson's Colleges of Nursing Database, 2002). In addition to the basic student charges, additional costs include textbooks, medical equipment, uniforms or laboratory coats, transportation to/from clinical sites, and thesis and dissertation expenses. Also, net income foregone is a consideration as the amount may be substantial, especially for full-time study.

Table 2. Average tuition, required fees, room and board, and percent of students receiving financial aid: graduate students by type of institution, academic year 2001-2002.*

Public Institutions	Average
Tuition (In-State Resident)	$3,659
Required Fees	$ 769
Room and Board (on campus)	$ 5,009
Percent of Students with Financial Aid	49.2%
Private Institutions	
Tuition	$11,020
Required Fees	$ 441
Room and Board (on campus)	$ 6,799
Percent of Students with Financial Aid	56.4%

*Peterson's Colleges of Nursing Database, © 2002. Peterson's, a part of The Thomson Corporation. All rights reserved.

E. Diminishing Pipeline of Enrollees and Graduates

Five-year trend data in a cohort of 91 schools reporting data each year to AACN from 2000-2004 showed an average increase of 118 doctoral students per year ($p = 0.01$). The pattern of graduations, however, indicated no trend (Berlin, Wilsey, & Bednash, 2005a). In the fall of 2003, there were 93 research-focused doctoral programs in nursing, with a total of 3,439 enrollees and 412 graduates. Fifty-three percent of enrollees were part-time students, the major reason that graduates represent only 12 percent of enrollees (Berlin, Wilsey, & Bednash, 2005a). The failure of schools to produce more graduates is particularly disconcerting given that the number of doctoral programs has increased from 54 in 1992 to 93 in 2004 (Berlin, Bednash, & Alsheimer, 1993; Berlin, Wilsey, & Bednash 2005a).

When evaluating the pipeline for doctoral preparation, trends in master's education also must be considered. Enrollments in master's programs declined steadily from 1996 until 2001. However, since 2001 enrollments have increased steadily and the latest five-year cohort of 303 schools reporting data each year from 2000-2004 showed an increase of

1,465 students per year (p=0.02). Five-year graduation patterns showed a steady decline from 2000-2003, followed by an increase of 249 graduates from 2003-2004. Despite the increase this year, regression analysis indicated an average decrease of 117 graduates in per year (Berlin, Wilsey, & Bednash, 2005a). However, graduations will continue to increase over the next several years, a reflection of increased enrollment since 2002. This is noteworthy because master's graduates are the source of a significant percentage of current and future faculty, as well as the source for future doctoral students. On the other hand, the shift of master's prepared faculty to doctoral student status may not increase the number of new people in the faculty pool because many already are functioning in faculty roles.

F. Age of Doctoral Recipients and Time to Degree

Of the 417 recipients of nursing doctoral degrees in 2002 who reported age, the median age was 47.3 years. Almost half of all graduates (50.8%) were between the ages of 45 and 54 years; 12.8 percent were older than 55 years, and only 36 individuals (8.6%) were under the age of 35. In comparison, the median age of all research doctoral awardees in the US in 2002 was 33.3 years (National Opinion Research Center, 2004). Given that the mean age of retirement for full-time doctorally prepared faculty in 2004 was 63.1 years, the number of productive teaching and research years are curtailed because of advanced age at graduation (AACN, 2005b). In 2002, the mean number of years registered in a doctoral program was 8.8 years for nursing graduates compared to 7.5 years for all research awardees. Mean time elapsed between entry in a master's program to completion of the doctorate in nursing was 2.1 years longer than other fields, 10.5 and 8.4 years, respectively (National Opinion Research Center, 2004).

G. Faculty Workload and Role Expectation Issues

1. Job Dissatisfaction. The literature frequently cites dissatisfaction with workplace as a reason for the loss of younger faculty from academia (Brendtro & Hegge, 2000; DeYoung & Bliss, 1995; Ketefian, 1991). Initiatives aimed at increasing the number of faculty will not succeed if faculty are not satisfied and retained. In order to quantify the extent of job dissatisfaction, job satisfaction variables from the 1999 *National Study of Postsecondary Faculty* (US Department of Education, 2001) were analyzed. Of the 1,073,667 postsecondary faculty in the database, there were an estimated 4,295 full-time nurse faculty holding doctoral degrees whose primary responsibilities consisted of teaching and research. The variables of interest were overall job satisfaction, job security, opportunity for advancement, workload, effectiveness of leadership, salary, benefits, and time to keep current in one's field. Percent of dissatisfaction was compared between two groups: (1) individuals holding the rank of full and associate professor and (2) individuals within the ranks of assistant, instructor, and lecturer. (The public use database would not allow further discrimination of ranks.) Findings revealed that junior faculty (assistant, instructor, and lecturer) reported higher percentages of dissatisfaction than did senior faculty on all variables except one. Junior faculty were not as dissatisfied as senior faculty regarding time available to keep current in one's field. The response to workload was most noteworthy. Dissatisfaction with workload was an estimated 54.7 percent for junior faculty, almost twice that of senior faculty (29.5%) (Berlin & Sechrist, 2003).

2. Role Expectations. Like all academic disciplines, changing faculty workload demands and role expectations are contributing to the nursing faculty shortage. Change is ever present: in the way higher education is conducted; in the traditional roles of teaching, scholarship, and service; and in the characteristics of today's students. These changes challenge faculty, require more time and preparation to be successful in the faculty role, and may cause those not sufficiently prepared to be dissatisfied and leave. The life of the college professor has changed considerably since the late 1980s (Longin, 2002). Describing the professoriate in transition, Berberet and McMillin (2002) highlight the varied responsibilities and stressors of faculty. In addition to the traditional teaching role, they assert that faculty also are expected to obtain extramural funding, conduct research, produce scholarship, and offer community and university service. Most full-time faculty spend extended hours advising and mentoring students outside the classroom, updating curricula, developing new courses, reading to remain current, and mastering new advances in technology. With these multiple demands upon all faculty, "time is becoming their most precious commodity" (p. 2). In fact, in a recent survey, "73 percent of faculty respondents expressed frustration at 'never having time to complete a piece of work'" (p. 9).

3. Today's Student Population

Nontraditional students. In past years, the "traditional" nursing student was an eighteen year old high school graduate entering college directly from high school. Since 1995, the average age of graduates from all nursing programs is 30.9 years, an increase of seven years in the previous decade (Spratley, Johnson, Sochalski, *et al*., 2001). Now, almost 73 percent of undergraduate students are considered "nontraditional" by virtue of their older age, more independent financial status, delayed entry into higher education, and competing responsibilities such as jobs and families. While the majority of students with the most nontraditional characteristics attend community colleges or private for-profit institutions, 14.4 and 19.0 percent attend public four-year and private not-for-profit institutions, respectively. Most students continue to pursue undergraduate education on a full-time basis, but the number of part-time students has tripled since 1970 (US Department of Education, 2002). Experienced faculty know that these more mature students commit a significant amount of time and energy to their work and family responsibilities. They demand a relevant, no-nonsense approach to education that is immediately applicable and complementary to their lives. Many mature students are gifted in their scholarship, motivation, life experiences, and insights. These characteristics often challenge faculty to plan more creative, practical, and interactive teaching-learning strategies such as case studies, problem-solving exercises, research projects, and service learning experiences. While these approaches may better meet the needs of mature students, they are time-intensive for faculty to develop and monitor.

Multi-generations. According to information gleaned from those who study the various generations, disconnects often occur between the values and characteristics of current older faculty and younger students, according to the age of each. For example, mature faculty members as a whole have very different views about work, authority, relationships, responsibility, and the nature of learning than today's twenty something

learners. These characteristic differences require new approaches to teaching-learning to meet the needs of various groups. (Brown, 2001; Zemke, 2001).

Student capabilities. Faculty are challenged by the broad range of student capabilities in today's classrooms, ranging from at-risk to exceptional. Levine and Cureton (1998) describe the current generation of undergraduates, in general, as committed to doing well, but often lacking in basic skills necessary for college-level work. This observation is echoed anecdotally by numerous nursing academics. Even more serious, about one-third of high school students considered at risk for low academic attainment enroll in a four-year college within two years of high school graduation, despite their at-risk status (US Department of Education, 2002). Some of these students may wish to enroll in nursing programs. In order to be successful, students lacking in prerequisite skills often need additional academic help and other types of support. Remedial work for these students, while necessary, consumes valuable faculty time. At the other extreme, exceptional students may be eager for advanced or enrichment opportunities in their studies. Faculty generally are eager to help meet the needs of all students, but developing and implementing activities appropriate for different learner subgroups takes time and energy.

Study habits. Conventional wisdom and many school handbooks suggest three hours of student out-of-class preparation for every credit hour of class. This would be roughly 45 hours of study for 15 class hours per week (five courses of three hours each). However, Young (2002) reported a recent study that described the study habits of recent freshman classes at four-year residential colleges. Sixty three percent of full-time students reported studying 15 hours a week or less, and 19 percent spent only 1-5 hours per week studying. Mature faculty may expect students to demonstrate the self-directed study habits prevalent decades ago. The "Nexter" generation (born after 1980) is characterized as confident, achievement-oriented, tenacious, and optimistic (Zemke, 2001). However, this group may be less independent than the previous age cohort, needing more supervision and structure (Brown, 2001). So, as these students enter nursing programs, faculty may need to help them understand what is required in the way of out of class preparation, provide detailed information about assignments, and clearly identify consequences of missing deadlines or being unprepared.

4. Expectations Unique to Nursing Faculty. In addition to the many roles and responsibilities common to all faculty, additional expectations are placed on nursing faculty. They often are expected to maintain clinical expertise, instruct students in clinical agencies, and engage in faculty practice. Moreover, nursing faculty who supervise students in clinical agencies may be responsible for an increasing number of very ill patients, adding an element not experienced by faculty in non-health care disciplines. Reflecting changing learning and work environments, nursing faculty are expected to develop proficiency in distance learning technology (AACN, 1999b; Potempa, 2001), and revise curricula to prepare graduates to excel in a rapidly changing health care environment (for example, see Tanner, 2001). The increase in mature students in accelerated programs adds the requirement to find challenging experiences for these students. What effect do these multiple roles, high expectations, and increased time commitments have upon the retention of nursing faculty and their ability to fully engage in an academic community? An AACN Issue Bulletin (1999a) on the faculty shortage

asserts that faculty life "presents a harder road than private practice or administration" (p. 3). "The expectation on faculty to 'do it all' remains in many [nursing] schools and probably is a major reason for an unhappy and stressful work environment" (Rudy, 2001, p. 402). While further study of faculty workplace issues is needed, several authors report increased stress (Oermann, 1998), emotional exhaustion (Fong, 1993), burnout (Brendtro & Hegge, 2000; De Young & Bliss, 1995), and early retirement (AACN, 1999a) among nursing faculty.

H. Alternative Career Choices

Coupled with inadequate enrollment and graduations in master's and doctoral programs is a lack of preparation and possibly a perceived lack of interest in teaching. In 1976-1977, 24.7 percent of graduates from nursing master's programs were education (teaching) majors (National League for Nursing, 1988). By 1994, only 11.3 percent of graduates majored in education and in 2002 the percentage dropped to 3.5 percent (Berlin & Bednash, 1995; Berlin, Stennett, & Bednash, 2003a). A slight upturn of 5.9 percent of graduates were education majors in 2004 (Berlin, Wilsey, & Bednash, 2005a). However, this was only half the number reported a decade earlier. The overall downward trend in nursing education majors was concomitant with increased emphasis on and interest in the nurse practitioner (NP) role, and since the mid-1990s, NP or combined NP/Clinical Nurse Specialist (CNS) enrollees and graduates have comprised the majority of master's enrollees and graduates. In 2004, 57.0 percent of master's enrollees and 64.4 percent of master's graduates were NP or combined NP/CNS majors (Berlin, Wilsey, & Bednash, 2005a). These programs focus on preparing individuals for clinical practice and may not result in a large number of graduates pursuing doctoral education. Master's degree graduates prepared as NPs found an increasing number of employment opportunities in both ambulatory and hospital-based clinical practice (Hinshaw, 2001). Many of these positions offer a good match between graduates' values and skills and those of their prospective employers.

As noted previously, an increasing percentage of nursing doctoral recipients planned to be employed in settings other than nursing education (National Opinion Research Center, 2001). The primary interest of doctoral program graduates returning to or accepting their first academic appointments is the development of research programs. In some institutions it has been reported that few are interested in teaching, and even fewer are interested in teaching undergraduate students (AACN, 1999a). Although AACN supports doctoral preparation for the faculty role, slightly more than half (52.1%) of current faculty hold master's degrees (Berlin, Wilsey, & Bednash, 2005b). These individuals are invaluable faculty resources. However, "Until we have a faculty that is fully credentialed and contributing to all three aspects of our mission (teaching, research, and service), nursing programs will be vulnerable on campus, because the small numbers of doctorally prepared faculty de facto diminish contributions to the full mission of the institution" (Anderson, 1998, p. 6).

Section III: Short-Term Strategies for Expanding the Capacity of Current Faculty

Section II summarized issues related to the dwindling numbers of full-time faculty. The various challenges described offer nursing education a unique opportunity to develop and

implement innovative, practical solutions in response to increasingly complex concerns, as nursing has done successfully throughout its history. The purpose of this section is to outline a variety of short-term strategies to alleviate the faculty shortage. It must be emphasized that *many* schools have developed exceptionally creative programs and initiatives that respond to current challenges and intercept future problems, including many of the suggestions included in this document. Others may find useful strategies described in this section, and as modeled by other schools. Clearly, not all of the strategies presented here are feasible in every setting, nor is this an exhaustive list. Institutions face different constraints and possibilities, depending on their demographic characteristics and geographic location. Each school is urged to engage in discussions with their own faculty, as well as with institutional, industry, and community leaders to seek location-specific opportunities to expand current faculty capacity.

1. ISSUE: Faculty capacity can be expanded in nontraditional ways with current resources.

Traditionally, nursing has objected to utilizing non-nurse faculty, recruiting nurse faculty with non-nursing degrees, and/or sharing resources and courses across disciplines and specialties, even though these non-traditional approaches may provide an important solution to a nursing faculty shortage and enhance student learning. The time has never been more appropriate to look for new approaches that make more sense. For example, nursing schools can create core courses that meet requirements across several specialty tracks. Interdisciplinary courses such as physical assessment, pharmacology, informatics, and gerontology can be developed on topics applicable to students representing a variety of health professions. Selected nursing classes/courses might be taught by non-nurse faculty, such as physicians, epidemiologists, statisticians, health policy analysts, education specialists, and ethicists. Selected administrative positions might be held by well qualified non-nurses. For example, the Assistant Dean for the undergraduate program at Loyola University Chicago and Associate Dean for Research at the University of California, San Francisco are not nurses. While traditional “team teaching” may be labor intensive, sharing resources and developing joint initiatives among faculty and across programs, disciplines, departments, and even between universities can save money, spare limited faculty resources, and model a spirit of professional and interdisciplinary collaboration, a value that nursing espouses.

Adoption of a broader view of the educational requirements for nurse faculty status deserves special consideration. Advanced practice nurses and other nurses who are skilled in clinical practice, management, teaching, or research but who lack traditional academic preparation in nursing are an untapped resource for faculty. For example, according to data from the National Sample Survey of Registered Nurses, there are an estimated 3,000 advanced practice nurses who are nationally certified, and hold doctoral degrees, but do not hold a master’s degree in nursing (Division of Nursing, 2001). Regardless of other credentials, the master’s degree *in nursing* is required by some state regulatory bodies as a prerequisite for nursing faculty positions. This also affects students in some baccalaureate-to-PhD programs that do not receive a master’s degree. These students may be required to defer a teaching position until completing the doctorate. As long as these barriers exist, many expert clinicians - and potentially expert faculty - are prevented from teaching when they are needed most. Using these clinicians

in creative faculty partnerships, with shared responsibility for courses can expand faculty capacity.

Faculty recruitment might include previously untried outreach strategies. For example, pharmacy education is experiencing the same phenomenon of faculty shortfalls as nursing. For the past three years the American Association of Colleges of Pharmacy has sponsored a special session at an American Society of Health-System Pharmacists clinical meeting (American Association of Colleges of Pharmacy, 2003). The two-hour session, titled "Is an Academic Career in My Future?" has enjoyed increasing attendance over the years. The session includes several different speakers who candidly depict the faculty shortage, highlight the many positive aspects of an academic career, and offer specific advice on how to be successful as a faculty member. Similarly, the Medical College of Ohio offers a seminar for master's prepared nurses titled "Are You Interested in Getting a Doctoral Degree?" which includes a segment on academic careers (AACN, 2002c). Nurse educators host, plan, and attend an impressive number and variety of professional conferences and activities in their various professional capacities. Suggesting these types of programs to inform practicing nurses about and attract them to the faculty role may be a good investment. Other schools have developed master's programs that respond to the faculty shortage. The University of Arkansas for Medical Sciences prepares nurse educators in a federally funded master's program specifically designed to attract minority and disadvantaged students, particularly for utilization in underserved parts of the state (AACN, 2003b).

In addition to readily available sources of faculty described above, current approaches can be modified to increase the faculty pool. Traditional nursing programs may not be configured in ways that facilitate a clear and timely path to completion. For example, full-time employed nurses who desire to prepare for the faculty role on a part-time basis may face major impediments to this process. Employed nurses who attempt to combine part-time graduate study with full-time employment often face inflexible work schedules and increased clinical workloads imposed by employers because of the nursing shortage. San Francisco State University's cohort master's program was designed to facilitate the academic experience of working nurses, and has had the additional benefit of increasing the number of graduates accepting teaching positions and pursuing doctoral study (AACN, 2003a). Even though many schools of nursing have modified their graduate programs to make them more available to working students, periodic review of prerequisites, matriculation policies, and class scheduling may be in order to ensure that programs are not unduly exclusive or restrictive. Local nursing executives might be queried about the days their facilities are best staffed so that course days and times can be planned accordingly.

In a similar vein, many nurse educators continue to accept the traditional view that significant clinical experience as a registered nurse is essential before matriculating in a graduate program that prepares students for specialization and/or advanced practice. This position may not be accurate and is not supported in the empirical literature. It certainly bears scrutiny in the face of decreasing faculty resources. While high academic standards should not be compromised, rethinking any artificial eligibility criteria may be a useful strategy to increase enrollments in nursing graduate programs.

Not only should we reconsider the experience prerequisite for nurses seeking graduate education, we also should reconsider whether a nursing undergraduate degree is an essential prerequisite to graduate study in nursing. One excellent source of future faculty includes individuals who earned degrees in fields other than nursing. Second-degree or accelerated programs transition these individuals into nursing careers in streamlined ways and often in an abbreviated time frame. Although these programs are not new, they have proliferated over the past several years. In 1990, there were 31 baccalaureate and 12 master's programs designed for second-degree students (Bednash, Berlin, & Haux, 1991); by fall 2004, there were 150 baccalaureate and 41 master's of these programs in operation (Berlin, Wilsey, & Bednash, 2005a). These individuals bring a wealth of academic ability, knowledge, and experience; plus they offer a different perspective to nursing, patient care, and the health care system (AACN, 2002a; Anderson, 2002). In short, these graduates may make excellent faculty members.

There is no question that nontraditional students pose unique challenges and require creativity and open-mindedness of faculty. We do not yet know if second-degree and accelerated programs are universally successful, and this is an important area of inquiry. One recent study (White, Wax, & Berrey, 2000), described a combined undergraduate and graduate nursing program designed primarily to prepare non-nurses with degrees in other fields for the nurse practitioner (NP) role. The program took roughly three years to complete, consistent with other accelerated master's programs across the country (AACN, 2002a). Twenty-nine graduates participated in the study, answering questions about their experiences. Of the 23 graduates employed as NPs, the majority believed the educational program prepared them adequately for the advanced practice role, attributing this largely to excellent clinical experiences and assignments. Interestingly, the majority did *not* believe that experience as a registered nurse was necessary to function in the NP role, although many had nursing experience. (The program encouraged all students to work as staff nurses when they became eligible, and 19 had done so.) This illustrates that programs can be designed to provide adequate basic as well as advanced clinical experiences for second-degree or accelerated students. Unfortunately, the authors stated that the graduates' "most commonly mentioned challenges included resistance from nurses, NPs, and traditional students who held the belief that the nontraditional students had not 'paid their dues' the traditional way" (p. 220). Nurse educators may know colleagues who hold similar views and who need encouragement to try nontraditional approaches in these challenging times.

The use of technology can provide additional immediate solutions to increase the capacity of faculty to support education, research, and practice. The growing importance of distance technology, and in particular, Web-based media to deliver educational course work is evident, and it is revolutionizing higher education. However, well-designed distance education programs require long-term planning and considerable institutional financial investment in equipment, support services, and faculty development (AACN, 1999b). Collaboration with existing distance programs may offer a faculty-sparing effect for selected courses.

STRATEGIES:

1. Consolidate core curriculum requirements across nursing majors or clinical tracks to reduce duplication of faculty effort.
2. Accept courses from other disciplines as appropriate to meet nursing program requirements.
3. Develop joint academic activities with other disciplines (health care and non-health care) both within the university and among universities to capitalize on existing resources.
4. Create interprofessional courses to meet the common needs of multiple related disciplines.
5. Utilize expert non-nurse faculty to teach selected nursing classes/courses.
6. Utilize qualified non-nurse faculty to hold administrative positions within the nursing academic unit.
7. Identify any existing regulatory requirements that limit nurses with non-nursing graduate degrees from teaching in nursing programs, so that efforts to remove these barriers can be planned.
8. Utilize the expertise of junior faculty by partnering them with senior, fully qualified faculty who can provide course oversight and faculty support without requiring the more labor-intensive team teaching.
9. Seek opportunities to sponsor educational sessions that inform nurses outside the academic setting about an academic career, emphasize the positive aspects of the role, and offer specific strategies for gaining the necessary credentials/experience to become faculty members.
10. As they exist, consider reducing or eliminating experience or other artificial prerequisites for graduate study.
11. Examine current curricula/programs and streamline them as much as possible to facilitate more timely program completion.
12. Remove impediments to graduate study for working nurses, such as offering more convenient times for courses, encouraging partnering institutions to offer students more flexible work schedules to accommodate class schedules, and offering courses specifically for partnering health care facilities, possibly at their site(s).
13. Attract more second-degree students to the nursing profession and encourage these and other high-achieving students to consider the faculty role early in their education.
14. Explore collaboration with schools or regional consortia that have successful distance education programs in place.

2. ISSUE: Retirement often has been viewed as an all-or-none phenomenon in the academic nursing community, making an experienced pool of faculty unavailable for continued contributions to the nursing academic unit.

Most nursing faculty members retire between the ages of 61.5 and 63.1 years (AACN, 1993, 1994, 2002b, 2005b). Many faculty approaching retirement would like to continue teaching in some capacity, but may be unable to do because of so because of restrictive university policies and/or retirement plan provisions. Rather than retirement marking the end of professional productivity, as many as half of retiring American academics return to the workforce (Dorfman, 1989). Research (Kelly and Swisher, 1998) has shown that, although retirement often is welcomed by nurses and valued as a time to focus on the self, retirees nevertheless miss professional affiliations and the discipline of going to

work. Women seem to have more difficulty retiring than men, and are more reluctant to retire. In fact, work may be more important in the lives of older women than previously recognized in the literature. While retirement is viewed as an attractive option to those whose work roles and environments are perceived as stressful and not enjoyable, many retiring nurses actively seek opportunities to volunteer and otherwise stay busy. These observations have particular implications for the female-dominated nursing profession, especially the subgroup of aging nurse academicians who might remain active if allowed and encouraged to do so.

AACN's 2002 survey of resignations and retirements indicated that of the 161 retirees 10 (6.2%) are continuing to teach on a part-time basis (AACN, 2002b). Some colleges and universities are recognizing the value of retired scholars, and are creating ways to keep them involved in the academic community. For example, Emory University has created an Emeritus College comprised of retired professors across disciplines. They meet for monthly meals and intellectual activities, teach selected classes, and participate in organized programs that keep them active in the lives of students (Fogg, 2003). The University of Southern California's Emeriti Center offers modest research stipends to retired faculty, recognizes them for continuing scholarship, and supports an off-campus lecture series in which they speak at functions in the community.

Retirement policies have been reconsidered at some institutions to allow retired faculty to return to teaching responsibilities. For example, the University of California (including their two schools of nursing at San Francisco and Los Angeles) have a faculty recall policy that allows faculty to collect their full retirement (which may be as high as 100% of their salary depending on years of service) while being paid for additional faculty service in teaching or administration. The policy demands that faculty be retired for a minimum of 30 days and be recalled for 47% time or less. The University of Florida-Gainesville also enables colleges to hire retired faculty members as soon as one month following their retirement date. The retired faculty member is not eligible for benefits, and is restricted in the amount of income that can be earned each year for their services if they are to continue to collect retirement income. Nursing may do well to utilize these and similar ideas to encourage retiring and retired faculty to remain active in the full array of nursing education activities.

STRATEGIES:

1. Examine college/university retirement policies and work to eliminate unnecessary restrictions to continued faculty service, particularly mandatory retirement ages and financial penalties for retired faculty who return to work.
2. Design new phased retirement plans that support the inclusion of productive retired faculty.
3. Redesign current faculty workload to accommodate part-time retired faculty.
4. If monetary compensation is problematic, reward retired faculty with incentives such as reimbursement for conferences, assignment of a graduate assistant, and release time for professional activities rather than direct salary support.
5. In addition to teaching, consider other ways that qualified retired faculty might save current faculty time by counseling or tutoring students, supervising in skills labs, mentoring students and/or faculty, assisting with research projects, and serving as ambassadors to the community.

6. As an inducement to participation, create programs that formally include and recognize retired nursing faculty as a continuing, productive part of the nursing academic unit.
7. Cultivate a workplace that is perceived by faculty as positive, productive, enriching, and satisfying so that they will be enticed to continue employment longer than originally planned.

3. ISSUE: Nursing clinical education is resource intensive for colleges and universities, but is critically important for the safe teaching of nursing as a practice discipline.

Nursing clinical instruction as practiced today is expensive in that it traditionally has been accomplished in small groups of students with close supervision because the learning experience includes assuming responsibility for direct patient care. In addition, faculty must have education and expertise in the specific specialty area in which they supervise students. Therefore, even schools with small student enrollment require multiple faculty experts to represent applicable specialties and to directly supervise learners as they provide care to human beings.

Nursing educators are becoming increasingly creative in offering high quality clinical experiences to students in the face of decreasing faculty resources. Many schools have developed formal partnerships with clinical facilities to use expert clinicians to teach students and thereby increase faculty capacity. These partnerships have varying characteristics and incentives. Some partnerships yield direct financial benefits to one or both partners, while others have indirect benefits. For example, non-salaried faculty appointments often are offered to agency clinicians who serve as teachers and/or clinical preceptors for students. Individuals selected for these roles enjoy increased professional recognition and other indirect rewards. In return for providing clinical teachers/preceptors, the agency may benefit from faculty services such as teaching or consultation; preferred placement of employees in the academic program; the benefit of collaboration as they seek magnet recognition and similar status from external agencies; and priority in recruiting the school's students upon graduation. These creative and mutually beneficial relationships are time consuming and labor intensive to develop, and require much thought about the benefits to be derived by each partner. However, these types of professional relationships may be a key to future success in nursing clinical education as faculty losses continue.

A large number of AACN member schools have created formal partnerships with their health service colleagues to increase nursing enrollments (undergraduate and graduate) and/or expand faculty capacity. For example, partnerships at the University of New Mexico and University of Iowa derive significant benefits to both partners, and have been highlighted at AACN conferences (AACN, 2002d, 2003c), but other examples abound. Initiatives by the University of Florida, the University of South Florida, and the University of Virginia, among others, specifically increase clinical faculty capacity and improve the learning experience of students (AACN, 2002c, 2003b). The University of California, San Francisco affiliated university medical centers provide three-year scholarships to students in the masters-entry program in nursing if students promise to work full time for one year between achieving their registered nurse license (earned after one year in the program) and returning to school. Students also promise to work at the

institution part-time while continuing in the master's program. Loma Linda University's partnering hospital encourages experienced clinicians to supervise students by paying preceptors a slightly higher salary (AACN, 2002c). Numerous nursing schools host programs to benefit the hospital clinicians who supervise students. For example, Emory University hosts an Annual Preceptor Institute to address clinical topics of interest (AACN, 2002c). Carson-Newman College specifically prepares agency preceptors for their critically important role in evaluating students (AACN, 2003a).

Partnerships between clinical facilities and academic programs offer the additional benefit of engaging both partners in discussion about how nursing is practiced in the real world and how it should be taught. Nursing programs consistently have not sought this expert advice from service colleagues. Dr. Tim Porter-O'Grady (2001), who often consults with health care facilities, asserts that nursing is changing quickly from practice-based activities such as "bathing, treating, changing, feeding, intervening, drugging, and discharging" to knowledge-based activities of "accessing, informing, guiding, teaching, counseling, typing, and linking...." (p. 183). Dr. Barbara Mark on the faculty at the University of North Carolina at Chapel Hill is engaged in funded research dedicated to redesigning the work of nursing. She states "We need to figure out how to redesign the work of nursing to get maximum efficiency and maximum effectiveness from the nurses we have" rather than simply adding more nurses (Vickers, 2002, p.6). During these times of possibly dramatic transitions in what constitutes nursing, formal collaboration between service and education will better identify emerging clinical issues, analyze actual roles and expectations of practicing nurses, and develop the required nursing curriculum.

In addition to looking internally, nursing may benefit from examining curricular designs, models, and teaching strategies from other health disciplines that offer effective learning and require fewer clinical faculty, such as expanded use of non-faculty clinical preceptors, concentrated clinical experience (e.g., 40 hours/week) late in the program, and increased use of simulations in the clinical laboratory in lieu of patient care assignments. Nursing traditionally has valued and even required one model for teaching: integrated theory and small group, faculty-supervised clinical practice throughout the nursing program. However, little empirical evidence exists to validate these preferred approaches as best practices in nursing clinical education. Nursing must be open to a variety of clinical teaching models that may have a faculty-sparing effect.

STRATEGIES:

1. Increase formal partnerships between schools of nursing and clinical facilities, identifying and capitalizing on specific benefits that are attractive and useful to both partners.
2. Develop clinical faculty appointments or other forms of recognition/inducement to qualified clinical agency personnel in return for their supervising/teaching students in those agencies.
3. As needed, educate agency personnel regarding strategies for clinical teaching and evaluation.
4. Include appropriate clinical agency personnel on school of nursing committees and task forces to gain their pragmatic perspective on the education of students.

5. Import clinical education strategies from other health disciplines, both internal and external to one's own setting, that demonstrate a faculty-sparing effect.
6. Explore use of virtual reality/simulated clinical experiences in supervised learning resource centers to reduce demands on clinical faculty.

4. ISSUE: We have insufficient evidence regarding how to best utilize faculty, and need more educational research.

Nursing has a long, proud tradition of excellence in education, often leading the way for other disciplines. This has never been more apparent than now, when the profession boasts an impressive number and variety of programs and periodicals devoted to nursing education. However, the overall decline in master's enrollments and increased emphasis on clinical specialization at the master's level in the past two decades help explain the lower number of nursing master's students specializing in education. Further, the decline in doctoral graduations, and the relatively small percentage of doctorally prepared nurses who choose an academic career may adversely affect the amount and variety of educational research being conducted. For example, the traditional clinical teaching model of one instructor for a small group of students and specific faculty-to-student ratios (e.g., 1:6; 1:8) mandated in many states developed out of practices deemed suitable at the time, but which may no longer be most appropriate. For the most part, these models and ratios have not been tested.

Faculty often approach didactic and clinical teaching the way *they* were taught, rather than incorporating new techniques based on educational research findings that may have direct impact on faculty productivity/capacity and optimal student learning. Therefore, we need to establish best practices in nursing education that are based on empirical evidence. Furthermore, with nursing and health care in a state of rapid change and faculty resources rapidly declining, nursing does not have the luxury of approaching teaching with traditional labor-intensive or trial-and-error approaches. We need specific research that validates best teaching practices in order to maximize our teaching resources.

The scholarship of teaching is a recognized part of the full range of scholarship within the discipline of nursing (AACN, 1999c). However, there may be a tendency to place higher value on the scholarship of clinical practice, and the considerable resources of the National Institutes of Health are not available to faculty who want to test innovative educational programs. Therefore, in some instances, faculty who are dedicated to conducting educational research to help develop a science of teaching may struggle for recognition of their work and may have difficulty obtaining funding or promotion.

STRATEGIES:

1. Work with nursing academic colleagues to emphasize the legitimacy and importance of educational research to the future of nursing.
2. Conduct research to better understand the phenomena of teaching and learning and to document the effects of various educational strategies.
3. Where necessary, study any specified faculty-to-student ratios that do not make sense in the current educational context, assess their origin and consider their continued applicability.
4. Study existing nontraditional/accelerated programs to determine their success, lessons

learned, and potential use as models for future programs.
5. Seek funding from organizations that focus on the scholarship of teaching, such as the Carnegie Foundation for the Advancement of Teaching and Learning.
6. Draw upon the expertise and seek collaboration with organizations/entities that focus on educational research.

5. ISSUE: Faculty require professional development, mentoring, and institutional encouragement to master the faculty role and continue in it.

As mentioned in Section 2, the college/university environment is changing in dramatic ways, adapting to the demands of the information age, reexamining what and how students learn, and responding to increasingly varied and demanding learners and new workforce skills (Berberet & McMillin, 2002). This can be positive and exhilarating; one of the most highly valued aspects of the job. The demanding educational environment and the full array of role expectations encourage faculty to embrace a constant state of self-improvement in order to be fully successful.

One of the most crucial expectations of faculty is to understand learning and to apply that knowledge in determining both *what* to teach and *how* to teach. Hopefully, most faculty have realized that the current higher education environment is about the learner and learning rather than the teacher and teaching. Educators now are expected to facilitate learning rather than convey vast amounts of content (Porter-O'Grady, 2001; Berberet & McMillin, 2002). In nursing, clinical expertise is essential to professional success, but clinical proficiency alone is not sufficient to convey nursing knowledge and practice to others in a meaningful, useful, appropriate way. Excellent nurses are not necessarily expert teachers. Because of the explosion of information on the art and science of teaching adults, faculty members cannot hope to be completely successful in their teaching without formal mechanisms of professional development. Without this instruction and support, a new faculty member may receive negative student evaluations, become frustrated with the faculty role, and seek other employment opportunities. Even experienced faculty can benefit from regular faculty development, particularly as new educational research and strategies are introduced that can improve their teaching. Doctoral programs in nursing may wish to add required education content and/or mentoring opportunities to familiarize all students with the academic role.

Strong orientation programs and ongoing faculty development opportunities are pivotal to keeping all faculty informed and confident about the teaching aspect of their role. These activities may occur in individual classes, formal courses, or independent activities. They may consist of informal peer mentoring such as the program used successfully in academic medicine (Pololi, Knight, Dennis, & Frankel, 2002), or it may be an intangible element that is nurtured in a community of teachers seeking to improve their expertise (Diekelman, 2002). They may be based on interdisciplinary national initiatives such as the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) Higher Education Program (Carnegie Foundation for the Advancement of Teaching, 2003) and the Preparing Future Faculty Program (Preparing Future Faculty National Office, 2003). Emory University's Clinical Teaching Institute has the goal of increased teaching competence and inclusion of clinical experts in the teaching of students, and enjoys the additional benefit of recruiting new faculty (AACN, 2002c). Faculty can take advantage

of a myriad of formal education programs, including the on-line master's level concentration in education such as that offered by Saint Joseph's College of Maine, one of the most heavily enrolled specialty tracks in education among AACN member schools. In addition, faculty can avail themselves of the new modular on-line Education Scholar Program (2003) endorsed by AACN. Whatever faculty development approach is adopted, it is imperative that formal assistance be offered to faculty, both as they begin the new role, and as they continue to master it throughout their careers.

In addition to conveying important information on teaching and learning, faculty development activities can help nurse educators become more comfortable with other aspects of their roles (scholarship, service, and other university missions), minimizing their struggle with the sometimes conflicting expectations. The full academic role has been described in the literature (Billings, 2003). Educators value being part of the academic community. "At the same time, however, faculty members express frustration with new responsibilities that bring differing and sometimes conflicting expectations and demands that leave many of them feeling stretched beyond reasonable bounds" (Berberet & McMillin, p. 9). In addition to informing faculty about their various roles, it is time to reconsider what tasks are pivotal to the faculty role, and which are less important. Can some traditional tasks and responsibilities be eliminated or relinquished? Can others be modified, transferred, or shared? Other disciplines are engaged in this type of self-analysis. A Minnesota medical school faculty examined their shared expectations, identified areas of strength and weakness as a group, prioritized their roles according to current information about their productivity and vitality, and identified areas that might be improved by faculty development activities or informal mentoring (Bland, Seaquist, Pacala, Center, & Finstad, 2002). As a part of the national Faculty Workload Project, Ithaca College of New York embarked on an effort to systematically reconfigure faculty work assignments appropriate to their discipline and educational goals. Seven departments, including physical therapy, encouraged faculty to explore innovative teaching-learning models, consolidate or streamline the curriculum, and increase the use of nontraditional environments and technologies in learning. After one year, both student and faculty satisfaction were increased as a result of changes instituted, and these changes will be used to create a college-wide model for revising faculty work (Association of Governing Boards, 2002).

Encouraging and facilitating master's prepared nursing faculty to pursue the doctoral degree is the ultimate in faculty development, and often can be done without losing the faculty asset. For example, faculty may opt to pursue on-line nursing doctoral degrees such as those offered by Duquesne University, University of Arizona, and University of the Wisconsin – Milwaukee, or summers-only nursing doctoral programs such as those offered by Loyola University Chicago and The Catholic University of America. Other programs, such as University of Colorado, offer combinations of intensive and on-line courses particularly useful for those who do not live nearby.

STRATEGIES:

1. Develop an AACN *Essentials of the Nursing Professoriate* document to describe the complexity of the faculty role and guide faculty development efforts of individual schools, as well as programmatic activities of AACN.

2. Identify minimum faculty development activities that should be required of all faculty, and incorporate these into internal hiring and/or evaluation strategies.
3. Formally orient part-time and adjunct faculty to their roles, keep them up-to-date on school and course expectations, and offer guidance and development as required.
4. Critically evaluate what faculty roles, tasks, and expectations can be eliminated or modified, and how faculty talents can be best utilized.
5. Provide faculty with a wide variety of role development opportunities, such as college/university-based activities, local and national conferences (including AACN conferences), and national programs such as the Web-based Education Scholar program, as endorsed by AACN.
6. Encourage faculty to complete post-master's or post-doctoral certificate programs in education for those who are not academically prepared in nursing education.
7. Cultivate an academic climate that offers guidance, encouragement, mentoring, discussion, resources, and other role development opportunities for all faculty members.
8. Incorporate nursing education content in all nursing doctoral programs in order to make doctoral students aware of this important and attractive career option.
9. In all settings and with all audiences, portray nursing and nursing education as scholarly and desirable careers.
10. Encourage master's prepared nursing faculty to pursue continue faculty service, and support them in pursuit of doctoral education.

Section IV: Long Term Strategies for Expanding the Future Pool of Nursing Faculty

Although short-term strategies may address immediate needs for faculty in schools of nursing, long-term solutions are required to meet the combined challenge of depleted faculty ranks and the escalating need for nurses. The current and projected shortage of faculty is complex and multifactorial. Ultimately, solutions must also be complex and multifactorial, with appropriate long-term strategies.

A. Recruitment

1. Develop a positive message. The declining number of those completing nursing graduate programs combined with a similar decline in colleagues who are joining academic communities is troublesome. Developing and articulating a positive message about the value of nursing higher education and an academic career is a first step in recruiting new academic colleagues. All nurses, particularly academicians, can deliver a positive message by serving as role models in all settings. In addition, promotion of clinical nursing leadership with emphasis on intellectual skills and practice autonomy will highlight nursing as an attractive career choice for students, many of whom later may be recruited into faculty positions. As a whole, those who have chosen a nursing academic career perceive it as a rewarding and satisfying career choice. They have numerous opportunities to identify the specific aspects of the career that make it attractive. Hosting information sessions and similar activities devoted to attracting qualified nurses to the faculty or to graduate study offer both short and long term benefits. A positive message about nursing education as a career choice should be conveyed to both nursing and external audiences.

2. Recruit at younger ages. The *mean age* of the faculty in schools of nursing must be decreased. The most obvious strategy is recruiting younger people into academics. Efforts must be made to increase the future pool of faculty by focusing on the decision-making process of middle and high school students. Large scale advertising campaigns such as *Nurses for a Healthier Tomorrow* (2000) and the Johnson & Johnson (2002) *Campaign for Nursing's Future* are making strides at the national level. Locally, nursing schools can sponsor educational and social activities at middle and high schools in their areas, using these occasions to highlight the positive aspects of nursing and academic career choices. For example, today's young people are drawn toward careers that require intelligence, encourage autonomy, and utilize technology. Many are attracted to medicine and science as disciplines that appear to best utilize their talents. An effective message to them will emphasize that a nursing career utilizes the very qualities and skills they value. Further, nurse educators can inform middle and high school guidance counselors about the modern roles of professional nurses; help them recognize and overcome gender and occupational stereotypes; and emphasize the rigorous nature of nursing education so these counselors can encourage qualified young people toward a nursing, and possibly academic nursing, career.

A number of nursing programs have instituted these types of recruiting programs in their communities (Health Resources and Services Administration, 2001; AACN, 2003a). For example, Hampton University begins marketing nursing as a career to elementary schools in their community. For over a decade, the University of California, Los Angeles has hosted 7th and 8th graders from an inner city school at a two-week summer program where they learn about health care, work with nurse researchers, and meet students and faculty. The University of Arkansas for Medical Sciences has recruiting initiatives targeted at middle and high schools as well as feeder colleges in the state. Loma Linda University, University of Akron, and Cedarville University have projects aimed at helping pre-nursing and nursing students overcome academic and other barriers to success in school. Many other university schools of nursing have outreach programs designed to attract elementary and high school students to nursing. Because these programs are heavily invested with faculty, students are able to see the strengths of both faculty and nursing roles, achieving two important purposes. Partnerships between high school districts and college/university faculty provide important internships and mentorships that can increase enrollees for little cost. During college, there are additional strategic opportunities to encourage the consideration of nursing academics as a career. This is particularly true for students who have not selected a major, and in some cases, for those who are unsure about the field they have chosen. For example, young people with education majors and other health-related specialties can be encouraged to consider nursing (and ultimately academics) as a career choice. The choice of nursing can be supported by developing matriculation agreements across colleges.

3. Seamless basic and advanced nursing preparation. Methods to streamline the trajectory from basic nursing education to academics must be explored and strengthened, even if it means restructuring current systems and cultures. As previously mentioned, the cultural norm of requiring several years of clinical practice between undergraduate and graduate degrees prior to assuming a faculty role still is held by many nursing faculty. Movement from undergraduate to graduate programs must be easy and seamless for

qualified students, so they can assume faculty positions more quickly. For example, a baccalaureate to master's/doctoral program may be initiated wherein a student admitted to a baccalaureate program would provisionally be admitted to a graduate program at the same time. By streamlining and accelerating progression through graduate education programs, we may attract younger students who don't bring significant financial and family responsibilities to their graduate experience; who can work part-time and study full-time rather than vice versa. Schools of nursing must find the delicate balance between attracting working nurses and encouraging timely completion of degrees.

4. Seek sources of financial aid. A cornerstone consideration in recruitment efforts must be financial aid. This aid could take several forms. The most obvious is improved financial aid for tuition and books. But more importantly for graduate students, financial aid also must include remuneration for lost pay while attending school. This financial assistance could take the form of outright grants to loans that are forgiven for a certain number of years of teaching service.

5. Support students from admission to graduation. The drop-out rate in undergraduate and graduate schools also must be addressed. Current students who struggle in both undergraduate and graduate nursing programs should be aggressively mentored and tutored, utilizing services of the university and community more so than intense nursing faculty resources. Data are now available that help faculty admission committees identify students who are most likely to complete programs successfully and in a timely manner (University of California, 2001). These data should be employed to inform admission requirements. Standardized screening and progression tools can be used in admission and continuation decisions in order to maximize student success. However, nursing must not increase its exclusivity during a time of severe shortage.

B. Retention

1. Enhance the work environment. Once faculty are recruited, all efforts must turn toward retention. One obvious strategy is to make the job more attractive by providing better salaries and benefits (especially at entry-level assistant professorships), lower faculty/student ratios, more autonomy, and better merit/reward systems. These measures require heavy support from state legislators (for publicly funded schools) and private industry or patrons (for private schools). Many deans and administrators have recognized these challenges and have been creative in finding ways to make faculty positions attractive, particularly by developing academic tracks in which teaching excellence is rewarded.

2. Support faculty. Formal development and mentorship programs for new faculty and recently graduated doctoral students can reduce the frustrations that often accompany the transition into the faculty role. In addition, institutions might consider the establishment of 'Academies of Nurse Educators', with the goal of elevating the teaching role through the support of a core group of talented teachers who will, in turn, improve the environment for all teaching faculty and serve as models and mentors for other faculty. Strategies to support beginning researchers also must be addressed, both by the federal government and by universities. These strategies must include financial support for

beginning researchers, effective mentorship programs to insure success in the academic role, and adjusted teaching and university service to allow junior faculty the time they need to build careers.

C. Collaboration

1. In the local community. Resources to implement various strategies to enhance faculty recruitment will require a multi-level approach. Legislative liaisons are essential. For example, state legislatures are the source of funding critical to many schools. Academic leaders must become increasingly knowledgeable about legislative solutions and resources, and must devote time to developing and maintaining these vital relationships. As the scope of nursing practice changes and the nursing and faculty shortages increase, state nursing groups may need to assertively reconsider nurse practice acts and accreditation or regulatory requirements that limit timely and creative approaches to resolving current problems. Partnerships with high schools and community colleges, private industry, health care providers and insurers, current faculty, and other stakeholders must be pursued to seek broad-based solutions and solicit money and other resources. Schools of nursing may have to collaborate with each other to augment rather than duplicate each other's strengths. Multiple governmental agencies should be explored as important sources of funding, such as the Centers for Disease Control and Prevention or the Department of Health and Human Services. A strong willingness to explore unconventional alternatives is required.

2. With other disciplines. Collaboration with other disciplines can provide increased faculty resources for students. Health care is increasingly complex and, by its very nature, interdisciplinary. Yet most schools do not provide students with an early introduction to the other disciplines. Interdisciplinary collaboration across the professions in required courses and clinical rotations would not only provide a partial solution to the nursing faculty shortage but also would provide students an opportunity to develop the attitudes and skills required for effective collaboration.

3. With other professional organizations. AACN has long been engaged in collaborative work with other national professional associations and organizations that have a stake in the future of nursing and nursing education. These affiliations and collaborations with educational and service entities must continue, because the issues we face are complex and interactive. For example, the nursing faculty shortage is a significant element of the larger nursing shortage. Nursing faculty issues are a subset of faculty issues for all disciplines. Changes in nursing practice directly affect nursing education. The issues concerning nursing education for the profession are issues of importance to *all* nurses. As a result, our concerns and spheres of influence overlap, and problems must continue to be resolved in a collaborative way. Developing a 'positive message' about a nursing academic career is a good example of potential collaboration across disciplines. Nursing education and the faculty shortage are of concern to multiple professional groups and nurses at all levels. The faculty shortage, like the nursing shortage, affects all stakeholders and will require support from all interested parties.

4. Within AACN. As previously mentioned, an AACN document describing the *Essentials of the Nursing Professoriate* would meet an immediate need to specifically describe elements of the faculty role. This document would be a useful reference as schools and AACN develop faculty development programs and initiatives in the immediate future. Further, it would form the basis for refinement and expansion as nursing practice changes and nursing education must respond accordingly in the future. In addition, AACN may want to more fully investigate specific issues that may have an impact on the faculty shortage. AACN member schools are an excellent source of information about the direction the association should go to meet the challenges of the faculty shortage.

In Summary

Nursing education has had a long and successful history, and often leads other disciplines in educational research, innovative teaching-learning activities, and problem resolution in the academic environment. The faculty shortage offers nurse educators an unparalleled opportunity to challenge past norms and think collaboratively and nontraditionally to meet the future. Nursing education may be shaped in new and exciting ways by the solutions developed to meet the current and future faculty shortage.

AACN Task Force on Future Faculty

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APPENDIX

This appendix stems from sessions at the AACN Hot Issues Conference, *Building Faculty Leadership During the Crisis: Solutions from a Faculty Perspective*, held April 24-26, 2003 in San Antonio, Texas. The conference took place immediately after the initial release of the Task Force on Future Faculty's white paper, and the paper was showcased during a program session. Discussion during both that session and the closing session offered excellent examples of what member schools are doing to ameliorate the faculty shortage.

AACN Task Force on Future Faculty
Program Session from AACN Hot Issues Conference
Friday**,** April 25, 2003
San Antonio, Texas

Facilitated by
Sheila Haas, PhD, RN, FAAN
Dean, Niehoff School of Nursing, Loyola University Chicago
Task Force Member

SHORT-TERM STRATEGIES

- University of the Incarnate Word recruits underrepresented nurses into faculty roles. Four minority RN to BSN students are funded with state tobacco settlement money plus a student employment budget to work part-time with a faculty mentor in all aspects of the faculty role. They receive a tuition-free master's degree immediately after completing the BSN. On master's graduation, they agree to work in a faculty position for two years. This initiative has the added benefit of energizing the faculty working with these students.
- California State University Long Beach works closely with the nurse executive at a local hospital on a number of initiatives. The nursing executive serves on the school's advisory board and is integral to the program. At the hospital's request, the school has on-site BSN and master's programs for hospital employees as a recruiting and retention strategy. The CNS graduate program has been revived specifically for the hospital. Faculty teach the on-site courses on an overload basis, earning a fee in addition to their full-time salary. The school is working with the hospital in their application for magnet status. The hospital has furnished the school with a faculty position to increase the number of generic students.
- Seattle University works with the local Veteran's Affairs hospital chief nurse executive. The hospital donated a master's-prepared nurse to enable students to perform clinical hours there.
- The University of Texas El Paso receives both subsidized faculty and cash for administrative costs and supplies from their clinical agency.
- New Mexico legislature recently passed a bill to allow state retirees to return to the state workforce, collect a full-time salary, and pause any retirement annuity to resume later. One retired nurse was enticed to return to the faculty full-time.
- Several states allow instructor-to-student ratio of 1:12 in clinical courses utilizing qualified preceptors, thereby expanding faculty capacity. Other states allow a 1:20 ratio (Delaware) or 1:25 (Texas) for precepted courses.
- Concern was expressed about recruiting part-time instructors to fill 'holes' for a particular semester, with generous incentives based on urgent need. Full-time faculty who carry much responsibility over time may be resentful of inducements offered to these professionals.

LONG-TERM STRATEGIES

- Numerous schools of nursing focus on recruiting high school students, but others believe that outreach to elementary and middle schools is necessary to engage student interest and ensure that students take the required math and science courses in high school. Loyola University Chicago sponsors nurse-managed school-based clinics as one way to make the nursing role visible and attractive to students. Guidance counselors are another valuable group to reach in order to educate students about nursing.
- West Virginia University developed a recruitment CD for counselors in middle and high schools to educate them about nursing. They also give a list of all nursing schools in the state to qualified applicants who cannot be accommodated.
- Illinois deans do something similar when a school cannot accept qualified applicants. The applicants are referred, sometimes individually by the dean, to other schools.
- The dean of Loyola University Chicago invites local chief nurse executives to semiannual breakfast meetings to determine if the school's graduates are meeting their respective agency's needs. In addition to helpful discussion among participants, these meetings generate useful ideas to take to the Board of Nursing and legislature.
- A dilemma was articulated regarding faculty recruitment. How do you recruit exceptional nurses as faculty while being honest about the heavy workload and the salary level that often falls below what nurses could make in other roles? Finding the right message is critical. For example, a nine-month contract may be attractive to a nursing faculty member interested in working in another capacity during their three months away from the academic setting.
- The University of Minnesota encourages all colleges of nursing in the state to identify their top undergraduate students and then invites these students to attend a reception and learn more about doctoral education. This event is perceived as a reward for students.

Re-Thinking the Faculty 'To-Do' List
Closing Program Session from AACN Hot Issues Conference
Saturday, April 26, 2003
San Antonio, Texas

Facilitated by
Carole Anderson, PhD, RN, FAAN
Vice Provost for Academic Administration
The Ohio State University
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Dorothy Powell, EdD, RN, FAAN
Associate Dean for Nursing
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WORKLOAD (Schools identified when known)

- Develop a revised notion of team teaching: 'Turn Teaching.' This technique is more efficient if instructors divide course workload and attend only their own classes rather than the traditional, labor-intensive model of team teaching in which all instructors participate in all course activities. One faculty might have full responsibility for a course 'on paper' and other faculty have a fraction of the workload.
  - Advantages:
    - Students have the benefit of multiple instructors; instructors save time.
    - Instructors can trade off responsibility to allow team colleagues protected 'scholarship time' for writing grants, attending conferences, etc. (University of Maryland)
  - Disadvantages:
    - Instructor may not have the faculty development opportunity of total responsibility for a course from beginning to end.
- As possible, delete responsibilities from the faculty role, such as advising, administration, and even committee work. Where is nursing faculty input critical?
- Save time and boost efficiency by improving faculty skills in meeting management, process improvement, and decision making. Consensus is not always possible. Vote and get over it!
- Different instructors teaching different sections of the same course do not need identical assignments. This saves faculty time by not having to meet, negotiate, and reach consensus. Different faculty expectations/assignments are not intrinsically unfair to students.
- Utilize different course numbers for lecture and clinical sections. One instructor coordinates the class and takes one clinical section; other instructors each take a clinical section. Team meetings are held at the beginning and end of each semester as necessary.
- Delineate work categories and assign faculty according to their particular strengths, i.e., classroom teaching, clinical teaching, research. What do people do

best? An instructor with a lighter research load might assume a larger teaching load. An egalitarian philosophy that all faculty should be doing the same things is difficult to maintain. Concurrently, schools should mentor faculty in all aspects of the role so they *can* assume all required aspects of the role.

- University of Wisconsin-Madison has a Teaching Academy that encourages campus-wide emphasis on excellence in teaching at the undergraduate level. Master teachers are used as consultants, mentors, and peer evaluators.
    - Doesn't include clinical instruction unique to nursing.
    - A Summer Institute (also University of Wisconsin-Madison) offers selected faculty a paid five-day retreat to develop a specific project in June immediately after the semester ends. The application process requires description of the project and resources that will be required at the retreat. A team can apply to do a team project.
    - On campuses where similar opportunities are not available, nursing may need to open a dialogue to see what other disciplines do well and what might be useful for nursing (e.g., increased use of simulation in engineering) or develop a multidisciplinary retreat on best practices.

ENVIRONMENT – How do we create a positive, collaborative environment that will encourage faculty to stay and entice graduate students to pursue an academic career?

- Collaborate with other schools that have a particular strength, not just with service institutions. For instance, the Howard and Yale Research Scholars Program offers selected Howard students the opportunity to participate in six weeks of intensive research at Yale, and continue a project throughout the academic year at home. Programs such as these socialize students to roles we want them to assume in the future. (Howard University, Washington, DC)
- Use exceptional undergraduate students as Teaching Assistants in labs. Encourage those interested in teaching to take a graduate-level course while still at the undergraduate level.
- Saginaw Valley State University nursing faculty has adopted a 'co-learners' philosophy with several innovative characteristics:
    - Teaching-learning experiences
        - No lectures are given.
        - Papers are combined with other experiences.
    - Changed terminology
        - Term *clinical* (implies hospital setting) has been replaced with *practicum* (refers to all settings).
        - Courses, for example, are named Critical Thinking I and II rather than Med-Surg I and II.
    - Instructors and students jointly determine norms at the beginning of each semester, by which all are expected to abide, such as sharing mistakes openly as learning opportunities, emphasis on self-reflection, etc.
    - Changes were instituted after two summers of intense negotiation because faculty decided that they wanted to escape the medical model and replace it with something unique.
- Recognize that some faculty members are not suited to a particular setting. For instance, one who loves teaching may not be best suited to a research-intensive

school because of the role expectations. An unhappy faculty member can 'poison the well' and may need encouragement to consider other employment.

- *Have fun* in the work setting. Dress up on Halloween and award prizes for costumes. Laugh in faculty meetings. Sponsor social activities. Improve communication among faculty. Give credit where it is due. Recognize contributions and successes of colleagues (McNeese State University, Lake Charles, LA)
- The group concurred that post-tenure review process must be robust in order to confront a unproductive tenured faculty member.
    - Faculty colleagues may be more effective in delivering a message to this person than the dean, such as "I resent what you're *not* doing while I'm working hard."
    - Dean may need to say "Everybody thinks you're underperforming. Do you enjoy that status? How can we get you back on track? We're going to come up with a plan."

PRIORITIZING – How can we focus on the institutional mission?

- Recognize and curtail "mission creep" that stretches resources. Engage in strategic planning. Do an environmental scan. Examine the mission. Assess resources. Where are the mismatches? Jettison courses that are under-enrolled regardless of how long-standing or dearly held they are.
- Agree with other schools of nursing that each will teach within their areas of strength, perhaps eliminating duplication of programs.
- Convince college/university executive leaders that nursing is important to the school, i.e., that the nursing major contributes to liberal arts because students need those prerequisites. Talk to everyone on campus. Attend all possible meetings. Be visible and articulate. As a result of these types of activities, Villa Julie College in Baltimore is a leader in maintaining the college president's vision and strategic plan.
- Saint Xavier University in Chicago found federal funding to utilize local schools, students, and families for community-based programs. They also have a campus center to care for the elderly, and increased emphasis on minority programs. Because service is a school priority, these activities offer student learning experiences while serving the community.
- Position your school well in the state. Faculty (not just the dean) should talk to legislators and other supporters whenever opportunities arise (University of New Mexico).
- Join forces with other schools to approach legislators with a unified message.
- Encourage dean-faculty collaboration when deciding how resources should be allocated. Share resources among several disciplines in a school with each partner supporting the initiative financially, such as a resource lab. Additional positive outcomes include joint research opportunities, interdisciplinary case studies, and joint programming (Towson University, Towson, MD).
- Unusual organizational locations for the nursing program are not always negative, although that might be the first impression. For example, the nursing program at the University of Tulsa is located in the college of business, a situation that has afforded nursing excellent resources.

IMPLEMENTING CHANGE

- Start with *data*: local, regional, and national, such as that offered by AACN. Use the data to identify trends, compare programs, and clarify problems. People listen to data much more readily than emotional appeals. We must talk the same language as the people we are trying to convince (Howard University, Washington, DC).
- As possible, hire assistant professors in a group so they form a cadre. This group has impressive credentials and accomplishments, and sees things differently because they are new. They can support each other, lunch together, and as a group, cause 'critical mass' for change and innovation. Ask *them* what needs to change and use them and their suggestions (University of Wisconsin – Madison).

ISSUES AND CHALLENGES

- Realize that clinical teaching is labor-intensive (particularly for undergraduate students) and seek partnerships with clinical agencies.
    - These partnerships can offer a faculty-sparing effect, but some faculty may need to resolve the issue of perceived loss of control.
    - Counter the 'we're too busy to precept students' argument by identifying and marketing specifically what the school can do for the hospital. For example:
        - A student's good precepted experience in the hospital is a powerful recruiting mechanism for the hospital.
        - Use of a problem-based service learning format solves actual practice problems at a clinical facility, directly helping the agency (St. Joseph's College of Maine).
- Recognize that a clinical practicum precepted by a non-faculty agency staff member is not a hands-off endeavor. It remains labor-intensive for faculty, but in a different way. When utilizing clinical preceptors, several issues must be resolved in advance, such as how to jointly evaluate students and assign clinical grades. Suggestions:
    - Faculty and preceptor establish objectives together.
    - Faculty makes clinical rounds and takes notes on students.
    - Preceptors identify problems and help faculty evaluate students.
    - Students keep logs which faculty member reads.
    - Faculty coordinates and validates preceptor availability for students.
- Utilize clinical simulation. Some systems are extremely expensive (e.g. $250,000 and a full-time operator), but are exceptionally realistic, down to mimicking 'patient' gestures (University of New Mexico).
- Patient simulation systems are particularly useful in physical assessment courses, such as graduate nurse practitioner courses (California State University Long Beach).

UPCOMING TRENDS

- 66% of students in master's programs are preparing for the nurse practitioner role, and this will continue to be the primary pool of future faculty. They may be exceptional NPs, but are not necessarily prepared to teach and will require faculty

development in order to be fully successful. However, there are many ways to develop faculty: attend courses, earn a certificate, observe excellent teachers, read books, do educational research.

- Within the faculty, different members can and should be allowed to do different jobs, all of which contribute to the mission. This is contrary to our historical desire to have all faculty doing the same type and amount of productive work, which may not be a useful strategy for the future.