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**ABSTRACT**

The Generic Baccalaureate Nursing Data Project, which expanded the national database on nursing education, is described. Over a 3-year period six national surveys of deans and senior nursing students were conducted to collect data in areas including recruitment, system interrelationships (institutional, community, and/or clinical agencies), student development, career plans, and student transition into clinical practice. A total of 465 deans' questionnaires and 2,336 students' questionnaires were assessed. Information was obtained on baccalaureate enrollment trends and enrollments influences, nursing program budget and support services, faculty development and workload determinants, and collaborative arrangements between nursing programs and clinical agencies. Prior to graduation, student data reflected considerable satisfaction with students' nursing and nonnursing coursework. The majority reported growth and development in all general and nursing academic areas. Graduate surveys of the same students studied factors influencing their choice of jobs, satisfaction with job-related factors, involvement in patient care decisions, and the impact of cost-containment measures on nursing practice. Most students were employed in hospitals and indicated that they felt adequately prepared for assuming their first nursing position. (Author/SW)

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SUMMARY REPORT

GENERIC BACCALAUREATE NURSING DATA PROJECT  
(1983-1986)

JANUARY 1986

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## ABSTRACT

The Generic Baccalaureate Nursing Data Project (GBNDP), funded in 1983 by the Division of Nursing-HRSA, DHHS. (1DUL023072-04) expands the national data base on nursing education. Over a three year period, six national surveys of deans and senior nursing students were conducted to collect data in areas including recruitment, system interrelationships (institutional, community, and/or clinical agencies), student development, career plans, and student transition into clinical practice.

A total of 465 deans' questionnaires and 2,336 students' questionnaires were processed and analyzed. Findings included data on baccalaureate enrollment trends and factors influencing enrollment levels, budget and support services for nursing programs, faculty development and workload determinants, and collaborative arrangements between nursing programs and clinical agencies. Prior to graduation, student data reflected considerable satisfaction with their nursing and nonnursing course work. The majority reported growth and development in all general and nursing academic areas. After graduation, these same students were surveyed to ascertain factors influencing their choice of jobs, satisfaction with job-related factors, involvement in patient care decisions, and the impact of cost-containment measures on nursing practice. Most students were employed in hospitals and indicated that they felt adequately prepared for assuming their first nursing position. Complete reports of findings may be found in AACN's Journal of Professional Nursing during 1985 and spring 1986.

In June 1986, a proposal to extend the project for two years to specifically include and examine RN/BSN preparation was recently approved for funding by the Division of Nursing. Project data will be available to the nursing community at large.

**SUMMARY REPORT**  
**GENERIC BACCALAUREATE NURSING DATA PROJECT**  
**(1983-1986)**  
**January 1986**  
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## **I. ADMINISTRATIVE/PROGRAMMATIC INFORMATION TO ASSIST FUTURE BUDGETARY DECISIONS IN MAINTAINING/ENHANCING STUDENT ENROLLMENT AND NURSING SUPPLY**

To monitor student enrollment trends in 1983 and 1984, deans participating in the project were asked to provide demographic information on the number of new generic students admitted to their nursing programs and factors that influenced their enrollment level. The data collected included:

- A. Number of new generic students
- B. Selected factors influencing enrollment
  - Pool of qualified applicants
  - Recruitment efforts (see Section II)
  - Availability of clinical facilities
  - Recruitment, turnover, assignment and professional development of nursing faculty
  - Fiscal support for schools of nursing
  - Adequacy of support services
- C. Selected trends impacting on nursing curriculum
  - Prospective Payment Systems for Health Care (DRGs)
  - Aging population
  - Computer technology

### **A. Number of New Generic Students**

In 1983, deans of participating schools (n = 220) reported a mean of 92 and a median of 76 new generic students admitted to nursing programs. Twenty-three per cent reported the enrollment number was smaller than in the fall of 1982, 40 per cent reported that it was almost the same, and 36 per cent that it was larger. An analysis of factors influencing each enrollment level was surveyed.

Of those whose admission of generic students was smaller, about one-half indicated that they had difficulty filling the class; others indicated financial or budgetary reasons, lack of financial aid, and procedural changes in timing of entry. No predominant reason for difficulty in filling the class emerged. Among the most frequent reasons given were rise in college costs, lack of scholarships and loans, competition with other college majors and other kinds of nursing programs, and a decrease in the number of high school graduates.

For those with approximately the same enrollment level as in the fall of 1982, many deans indicated that steady state enrollment patterns within the institution guided them in choosing the number of students enrolled. Others cited limited numbers of clinical facilities as well as fiscal reasons. Of those whose admission of generic students was smaller, about one-half deans indicated that they had difficulty filling the class; others indicated financial or budgetary reasons, lack of financial aid, and procedural changes in timing of entry.

When the enrollment level in 1983 was larger than in 1982, deans highlighted three factors that may have contributed to this change. The factors were improved reputation of the institution and nursing program, intensive recruitment

efforts, and increase in positive publicity within the institution about the nursing program. In addition, some enrollments increased because the program was new and increased enrollment was planned as part of the phasing in process.

In the 1984 Deans' Survey, comparison of data on new generic student enrollment for periods 1982, 1983, and 1984 showed that more deans reported smaller enrollments (31 per cent) in 1983 than they did in 1982 (23 per cent). In addition, fewer deans reported larger enrollments in 1984 (22 per cent) than in 1983 (36 per cent). It is not clear whether these trends represent a move to greater part-time enrollment status, an actual drop in full-time enrollments, or differences caused by numbers of schools reporting data in the two surveys.

### B. Selected Factors Influencing Enrollment

Factors believed by deans (n = 246) to influence the 1984 school enrollment level of new generic baccalaureate students are listed in Table 1.

Table 1 Factors Believed by Deans to Influence Schools' 1984 Enrollment Levels of New Generic Baccalaureate Students (n = 246)

<u>Factor(s)</u>	<u>n</u>	<u>% of Total</u>
Pool of qualified applicants	135	54.9%
Recruitment efforts	101	41.1%
Availability of clinical facilities	97	39.4%
Availability of nursing faculty	96	39.0%
School or institution policy in regard to enrollment level	85	34.5%
Availability of scholarships/financial aid to students	84	34.1%
Availability of space in school	68	27.6%
Fiscal support of institution	61	24.8%
Availability of support services	36	14.6%
New program with goal to expand	20	8.1%

More specific data will be discussed below regarding the following factors influencing enrollment: pool of qualified applicants, recruitment efforts, availability of clinical facilities, availability of nursing faculty, fiscal support for schools, and adequacy of support services.

#### Pool of Qualified Applicants

In 1983, most schools (94 per cent) used the same admission standards as in fall 1982. Respondents' comparisons of the quality of new generic students admitted in fall 1983 to those admitted in 1982 showed that 60 per cent of the responding deans indicated that there were no marked differences, 31 per cent of the deans reported more high achievers, and 7 per cent of the schools accepted more borderline admissions. Approximately 3 per cent of the 220 responding deans did not report on these comparisons.

### Recruitment Efforts (see Section II)

Information regarding effectiveness of recruitment strategies employed by deans is reported in Section II.

### Availability and Use of Clinical Settings

In the 1984 Deans' Survey, respondents reported on the types of clinical settings that were available and used for their baccalaureate nursing program clinical experiences. As can be seen in Table 2, in-patient hospital settings still predominate with over 84 per cent of the respondents reporting availability and use of medical-surgical, obstetrics, pediatric, and psychiatric hospital settings. Respondents (n = 243) reported that these clinical areas were available. However, when asked to specifically describe any clinical areas in which they were having difficulty in acquiring placements, 85 deans cited in-patient pediatrics, and 31 deans cited in-patient obstetrics.

An analysis of nonhospital settings in Table 2 revealed that the three primary areas available and used were: health departments (82.5 per cent), nursing homes (81.3 per cent) and home care settings (78.5 per cent). Many other nonhospital settings were said to be available but not used at this time. The table did not include industrial health settings, senior citizen centers, or day care centers that were listed by individual deans under "other" category on the survey.

The most frequently cited reasons for difficulty in obtaining clinical placements were competition between nursing programs for the same clinical units/agencies, reduced inpatient census in hospitals, some agency restrictions on student clinical experiences, and the geographical location of the nursing program.

When asked how they countered difficulties in acquiring quality clinical placements, most deans said they varied the clinical schedule using evening hours. An additional strategy employed was using more nontraditional settings such as clinics, HMOs, surgery centers, retirement centers, and/or day care centers. Some deans reported looking at such options as weekend and summer clinicals. In some geographical areas, schools reported forming consortiums to conserve and consolidate the limited clinical resources. In summary, these strategies reflect greater flexibility, cooperation, and creativity of deans in meeting the challenges of providing meaningful clinical experiences.

**Table 2 1984 Deans' Report on the Availability and Use of Clinical Settings for Student Placement in 1984 (n=246)**

Clinical Setting(s)	Availability							
	Used and Available		Used But Limited Availability		Not Available		Available But Do Not Use	
	n	% of Total	n	% of Total	n	% of Total	n	% of Total
<b>Medical surgical nursing</b>								
General unit	237	96.3%	4	1.6%	0	0.0%	0	0.0%
ICU/CCU	164	66.7%	46	18.7%	3	1.2%	25	10.2%
<b>Internal child health</b>								
Obstetric & delivery, post partum	228	89.4%	23	9.3%	0	0.0%	0	0.0%
Ob:outpatient	164	66.7%	46	18.7%	13	5.3%	12	4.9%
Peds:in-hospital	207	84.1%	35	14.2%	1	0.4%	0	0.0%
Peds:outpatient	156	63.4%	53	21.5%	16	6.5%	12	4.9%
<b>Psychiatric</b>								
Psych:in-hospital	228	89.4%	18	7.3%	3	1.2%	2	0.8%
Psych:outpatient/community health center	164	66.7%	35	14.2%	12	4.9%	27	11.0%
<b>Gerontology</b>								
Nursing home	200	81.3%	7	2.8%	0	0.0%	32	13.0%
Nopice	59	24.0%	45	18.3%	30	12.2%	77	31.3%
Extended care facility	147	59.8%	17	6.9%	13	5.3%	48	19.5%
Retirement community	118	48.0%	17	6.9%	29	11.8%	57	23.2%
Geriatric day-care centers	102	41.5%	34	13.8%	32	13.0%	58	23.6%
<b>Community</b>								
Health department	203	82.5%	19	7.7%	4	1.6%	12	4.9%
Home care	193	78.5%	21	8.5%	4	1.6%	16	6.5%
HDA/clinics	97	39.4%	35	14.2%	39	15.9%	42	17.1%
Rural nursing	88	35.8%	20	8.1%	62	25.2%	43	17.5%

Note: n = 246; in all categories there was some missing data

### Recruitment, Turnover and Professional Development of Faculty

Recruitment and retention of qualified faculty are salient issues for baccalaureate programs in nursing. In the 1984 Deans' Survey, deans (n = 246) reported a mean of 12.5 per cent for the faculty turnover rate each year since 1981 in the baccalaureate program. Those schools with rates greater than 25 per cent (n = 36) indicated that faculty cited family responsibilities, change of residence, return to school to pursue doctoral studies, low salaries, tenure requirements, and/or return to clinical practice as reasons for turnover. A number of deans reported other contributing factors for turnover including salaries that were too low and noncompetitive, the geographical location of the school, and limited number of qualified doctorally prepared faculty. These

findings are consistent with those of Sorensen, et al.<sup>1</sup> in their study of faculty mobility in baccalaureate and higher degree nursing programs in Research I and II universities.

Of the deans surveyed, 56 per cent indicated they had difficulty recruiting and retaining highly qualified faculty to teach in their baccalaureate programs. Schools in the Midwest and West reported more difficulty than those in other regions of the country.

Some additional faculty issues were explored, e.g., cross-assignment of doctorally prepared faculty to teach on both baccalaureate and graduate program levels, requirements of clinical agencies that faculty meet standards in order to supervise student clinical experience at their facility, calculation of research/scholarship time into the workload formula for faculty assignments, and methods used to support faculty professional development.

Forty per cent (n = 94) of the 234 respondents reported having only baccalaureate programs, so they did not cross-assign faculty. Of those schools that reported having both baccalaureate and graduate programs (n = 140), 82 per cent reported cross-assigning faculty. Of the 115 schools that cross-assigned, all respondents indicated that it was done to match expertise to nursing program needs, 83 per cent cross-assigned to promote cohesiveness between faculty in undergraduate and graduate programs, and 60 per cent cross-assigned to equalize teaching/clinical/research workloads between levels.

Just over one-half (57 per cent) of the deans reported that nursing service agencies require faculty who teach clinical courses to meet particular standards before they can supervise student clinical experiences. Eighty-three per cent of these schools reported that agencies required that faculty complete a formal orientation to the facility including work experience on the nursing unit to which students would be assigned. Cardiopulmonary resuscitation certification was the second most commonly required standard. Infrequently, agencies required a minimum number of hours of clinical practice in a specialty area or a minimum number of continuing education units in nursing to be updated yearly. What is not known is how long these requirements have existed, which agencies required them, or whether new requirements are being demanded.

Of the schools in the study, 47 per cent reported calculating research/scholarship time into the workload formula for faculty assignments. There were significant differences by type of nursing school with inclusion of research/scholarship time predominating in academic health centers (64 per cent) and 51 per cent in universities versus 28 per cent in four year colleges ( $\chi^2[2, n = 230] = 13.2, p = .001$ ). There also were significant differences according to institutional type with 57 per cent of private secular, 52 per cent of public, and only 33 per cent of private religious schools calculating research/scholarship time into their workload formula ( $\chi^2[2, n = 232] = 7.4, p = .024$ ).

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<sup>1</sup> Sorenson, G.E. Van Ort, S.R., Weinstein A.C.: Faculty mobility in baccalaureate and higher degree nursing programs in Research I and II universities. Journal of Professional Nursing 1:138-44, 1985.

Table 3 lists methods employed by deans to support professional development of their faculty.

Table 3 1984 Deans' Report on the Methods to Support Faculty Professional Development (n = 246)

<u>Support Method(s)</u>	<u>n</u>	<u>% of Total</u>
Budget allotted to support faculty representation at important nursing meetings/conferences during year	207	84%
Teaching/clinical assignments adjusted to accommodate special clinical practice, research, or educational needs	163	66%
Provision of one day per week for research, writing, meetings	120	49%
Tuition remission provided for doctoral or post-doctoral courses/seminars	84	34%
Provide time/day during work week for independent faculty clinical practice	79	32%
Workload is less one semester/quarter of academic year to provide time for professional development	52	21%

#### Fiscal Support for Schools

Recently, some colleges and universities have been operating under financial stress. Put within the context of the parent institution's financial status, most deans (65 per cent) in 1984 believed their baccalaureate nursing programs were adequately funded, 13 per cent stated that they were well funded and 22 per cent said that they were inadequately funded. Of the inadequately funded schools, 69 per cent were in public institutions, 11 per cent were in private secular and 20 per cent were in private religious institutions. The well-funded schools were mostly in private religious institutions (47 per cent) versus public (37 per cent) and private secular (15 per cent) ( $\chi^2[4, n = 244] = 10.32, p = .035$ ).

Sixty-eight per cent of the deans thought that their generic baccalaureate programs were receiving funds equivalent to other similarly sized programs within their universities, 26 per cent thought that their programs were given higher priority, and 6 per cent thought that they were being given lower priority than were other similarly sized programs. Deans in four-year colleges were more likely to feel that nursing received high priority (four-year colleges, 43 per cent; university, 21 per cent; academic health center, 16 per cent) ( $\chi^2[ n = 235] = 13.3, p = .01$ ).

### Adequacy of Support Services

Data on the adequacy of support services are shown in Table 4. The only differences among schools occurred with clerical support, which was perceived as more adequate in private than in public institutions ( $\chi^2[4, n = 244] = 22.08, p = .001$ ). Approximately 70 per cent of the deans perceived that support services were adequate or more than adequate in all areas except computer services. Forty-three per cent of the deans rated computer services less than adequate.

Table 4 1984 Deans' Perceptions of Adequacy of Support Services for Schools of Nursing

<u>Service(s)</u>	<u>Level of Support</u>					
	<u>More than Adequate</u>		<u>Adequate</u>		<u>Less than Adequate</u>	
	<u>% of n</u>	<u>Total</u>	<u>% of n</u>	<u>Total</u>	<u>% of n</u>	<u>Total</u>
Audio-visual equipment	71 28.9%		144 58.5%		29 11.8%	
Administrative/faculty office space	61 24.8%		122 49.6%		61 24.8%	
Library	61 24.8%		143 58.1%		40 16.3%	
Meeting/conference room space	51 20.7%		125 50.8%		68 27.6%	
Classroom space	43 17.5%		135 54.9%		65 26.4%	
Computer services	32 13.3%		105 42.7%		103 41.9%	
Clerical support	30 12.1%		142 57.7%		72 29.3%	

Note: n = 246; In all categories there was some missing data

#### C. Selected Trends Impacting on Nursing Curriculum

Changing health needs, advances in the science and practice of nursing and evolving economic and political circumstances can precipitate alterations in curriculum.

The majority of deans indicated that the following trends could likely influence curriculum planning and preparation of the professional nurse during the next ten years. The most important trends were: more nursing care provided through HMOs, ambulatory centers, surgical centers and home care rather than hospitals (98 per cent); greater pro-active nursing involvement in health-care-policy making (85 per cent); nurses role in health education of consumers (87 per cent); an increased number of independent nurse practitioners (60 per cent); and the development and implementation of stress management programs/centers by nurses (48 per cent).

Three areas of special interest and concern that may be impacting on nursing programs were identified by the Advisory Committee as important for current monitoring: prospective payment systems for health care (DRGs), aging population, and computer technology.

Prospective Payment Systems for Health Care (DRGs)

Seventy-one per cent of the deans indicated that prospective payment systems were influencing their nursing programs especially in the Western and Midwestern regions ( $\chi^2[3, n = 243] = 10.6, p = .014$ ). Deans' perceptions of how DRGs have influenced their nursing programs are reported in Table 5.

Table 5 1984 Deans' Perceptions of the Influence of Prospective Payment Systems (DRGs) on Their Nursing Program (n = 174)

<u>Influence(s)</u>	<u>n</u>	<u>% of Total</u>
Increased emphasis on home care/community clinical experiences	133	76%
Increased emphasis on political/economic/legal issues in the nursing curriculum	103	59%
Necessitated changes in clinical placements and/or clinical hours	94	54%
Increased collaboration with nursing service agencies to better prepare nurses in caring for patients with shorter length of stays	73	42%
Instituted instruction for faculty and students to better prepare them for confronting ethical/economic issues associated with health care cost containment	73	42%
Emphasis on the development of critical nursing skills for patient care in community settings (ventilator care, chemotherapy administration etc.)	64	37%
Need for faculty to be more directly involved in clinical practice to enhance their understanding of the implications of health care economics on quality of nursing care	51	29%
Alteration in clinical requirements; e.g., abbreviated nursing care plans and focus on discharge planning	32	18%
Use of more simulated clinical activities as the in-patient hospital population decreased	21	12%

Note: Analysis included only deans who indicated DRGs influence on their programs.

A follow-up questionnaire was sent to the 1984 senior student participants one year after graduation in May 1985 (1984 follow-up respondents). They were asked if DRGs were having an influence on nursing at their place of employment. Respondents indicated that the increase in referrals for home and long-term care was the predominant influence (61 per cent). This was consistent with the 1984 deans' responses which stated that the most frequent change in curricula was increased emphasis on home care and community clinical experiences (76 per cent).

Several respondents did not answer the question because they worked in facilities that were exempt from prospective payment plans. See Table 6 for the 1984 follow-up respondents' perceptions of the influences of DRGs on nursing practice.

Table 6 1984 Follow-Up Respondents' Perceptions of the Influence of Prospective Payment Systems (DRGs) on Nursing Practice at Their Place of Employment (n = 432)

<u>Influence(s)</u>	<u>n</u>	<u>% of Total</u>
Increase in referrals for home care and long term care	261	60.6%
Increase in discharge planning	224	52.0%
Readmission of patients who were discharged too early	201	46.6%
Closing of units due to decreased patient census	190	44.1%
Increased emphasis on health promotion programs	175	40.6%
Reduction in full-time RN staff	156	36.2%
Reduction in non-RN staff	154	35.7%
Increased census at home care or long term care facilities	129	29.9%
Need for continuing education in political, economic, legal, ethical fields	126	29.2%
Increased need for nurses' political involvement or participation in profession organizations to influence health care policy	104	24.1%

#### Aging Population

Ninety-one per cent of the responding deans indicated that gerontological nursing was included in their baccalaureate curricula, with an additional 5 per cent indicating its inclusion was being planned/developed. Of those including gerontological content, 93 per cent integrated the content within required undergraduate nursing courses, 36 per cent included the content in undergraduate elective courses, and 25 per cent had it in a multi-disciplinary course within the institution. Some schools taught the content in many courses.

The four major contributing factors that deans believed influenced teaching gerontological nursing were: shift in general population toward more elderly (95 per cent), availability of nursing homes and geriatric day care centers for clinical experiences (64 per cent), increase in employment opportunities for geriatric-prepared RNs (52 per cent), and recommendations of state/national professional nursing organizations (33 per cent). Eleven per cent of the deans reported that gerontological content in the curricula was mandated by their state legislature and/or boards of nursing.

The gerontological nursing content might be taught by a faculty member with gerontology specialty (63 per cent), a faculty member without gerontology specialty (61 per cent), a gerontology-prepared clinical nurse specialist (19 per cent), and/or multi-disciplinary team (14 per cent). Many deans checked more than one choice.

### Computer Technology

Computer technology is growing very rapidly in schools of nursing. Schools are purchasing more software and equipment to expand their application beyond administrative use to faculty and student use. The following data were collected in surveys administered between November 1983 and May 1985 to document the current computer application in schools of nursing.

- Use of Computers in Nursing Schools as Reported by Deans in November 1983 (n = 218)
- Assessment of Computer Skill Level by Senior Nursing Students in February 1984 (n = 749)
- Adequacy of Computer Services Reported by Deans of Nursing Schools in November 1984 (n = 246)
- Use of Computers in their Nursing Practice as Reported by 1984 Follow-Up Respondents in May 1985 (n = 432)

Use of Computers in Nursing Schools as Reported by Deans in November 1983

Table 7 1983 Deans' Report on Application  
of Computers in Baccalaureate  
Nursing Programs (n = 218)

<u>Application(s)</u>	<u>n</u>	<u>% of Total</u>
Nursing administration		
Student information/recruitment	84	38.5%
Budget planning	53	24.4%
Faculty information/tenure	40	18.4%
Faculty teaching assignments	23	10.6%
Nursing faculty support		
Faculty research	123	56.5%
Faculty development	67	30.8%
Development of software for Computer Assisted Instruction	57	26.1%
Nursing student application	49	22.4%
CAI-remedial work	32	14.7%
Patient care	16	7.4%
Student clinical placements	13	5.9%
Student clinical rotations	10	4.6%
Off-campus programs		

As can be seen in Table 7, in 1983 computers were primarily used for faculty research, student information-recruitment, and faculty development. Little application was made to curricula or clinical areas. When computers were used, application primarily involved computer assisted instruction labs.

#### Assessment of Computer Skills by Senior Nursing Students in February 1984

In February 1984 only 9 per cent of the senior students sampled reported that they felt skilled in using computers and were satisfied with the computer services in their nursing program. Forty-one per cent (n = 309) said they were minimally skilled and 47 per cent (n = 356) felt that they were not skilled. Those students who did have some computer skills reported acquiring their knowledge/skills from the computer training sources listed in Table 8.

Table 8 1984 Senior Students' Report on Their Sources of Computer Training (n = 749)

<u>Training Source(s)</u>	<u>n</u>	<u>% of Total</u>
On the job training	156	20.8%
Course(s) in college/university but outside school of nursing	124	16.6%
Self-instruction	95	12.7%
Other: high school, friend/family	72	9.6%
Course(s) in school of nursing	53	7.1%

#### Adequacy of Computer Services By Nursing Deans in November 1984

By 1984, 69 per cent of nursing schools indicated they had computer services. When asked to describe the adequacy of their computer services in general, 137 deans (56 per cent) said services were adequate while 103 deans (42 per cent) said services were less than adequate and 6 deans (2 per cent) did not respond.

#### Use of Computers in Their Nursing Practice by 1984 Follow-Up Respondents

Almost 50 per cent of the 1984 follow-up respondents (n = 203) indicated that they use computers in their nursing practice. Table 9 reflects some of the areas in which computers are used. Twenty-eight nurses (6.5 per cent) reported that their nursing programs prepared them to use computers, while another forty-five (10.4 per cent) indicated they received limited preparation, and the remaining 130 respondents (83.1 per cent) were not trained by their schools to use computers. The deans' and students' survey data indicate that the need for computer skills and the informatics of computer technology are becoming a necessity for clinical practice. Therefore, it is likely the statistics in these surveys will be changing rapidly in the near future as computer informatics receives greater emphasis in nursing curriculum.

Table 9 1984 Follow-Up Respondents' Report on the Use of Computers in Nursing Practice (n = 203)

<u>Use of Computers</u>	<u>n</u>	<u>% of Total</u>
Clinical agency data base for ancillary departments, e.g., pharmacy, lab, central supplies	178	87.7%
Clinical agency computerized monitoring system(s), e.g., cardiac, hemodynamics monitoring	84	41.4%
Recording patient information, e.g., charting, history taking	58	28.6%
Computerized Care Plan	28	13.8%
Clinical agency information retrieval system	25	12.3%

## **SECTION II. MECHANISMS TO MAINTAIN/ENHANCE ENROLLMENT**

Information collected regarding recruitment efforts and other methods used to maintain/enhance enrollment levels specifically address : A) effectiveness of recruitment strategies employed by deans in 1983, B) age range of new generic students entering baccalaureate programs in 1984, and C) 1984 senior students' reasons and the time period for choosing a baccalaureate program.

### **A. Effectiveness of Recruitment Strategies Employed**

Ninety per cent (n = 200) of the deans responding in 1983, reported that the parent college/university maintained a central office with responsibility for recruitment, usually titled Admissions Office or Student Affairs Office. Only 67.7 per cent of these respondents found that this office addressed their school's needs, with 21 per cent indicating that it did not, and 11 per cent not responding. The problem cited most often was that people outside nursing do not understand the modern nursing profession. Also, these central offices generally focused on recruitment of high school students with little attention on transfer or older students with second degrees. Many schools reported doing their own recruitment or always supplementing the central office's undertakings. Most schools did not report employing nurse recruiters or having a formal recruitment program but did utilize students and faculty as sources of information at high school activities, college fairs, and meetings of student groups.

Table 10 provides descriptions of use and perceived effectiveness of recruitment methods employed by deans in 1983. Providing brochures, newsletters and bulletins; participating in open houses, career days, health fairs, and local community events; and maintaining relationships with high school counselors and nursing practice personnel were used and rated "Very Effective" or "Effective" by more than half the respondents. Radio and television spots or posters and structured use of alumni, the National Student Nurses' Association, school nurses or marketing firms were not commonly used by most respondents. Other recruitment strategies reported by individual deans included invitations to applicants to visit the campus, rapid follow-up to inquiries and appointments for advising, and collaboration with other colleges of nursing in recruitment. Some institutions reported use of bumper stickers, videotapes, poster contests, personal letters, visits to junior colleges, contact with college transfer advisors, and newspaper ads.

### **B. Age Range of New Generic Students Entering Programs in 1984**

Age ranges of new generic students as reported by deans in 1984 were as follows: 17-21 years old, 60.7 per cent; 22-30 years old, 27.6 per cent; 31-39 years old, 8.6 per cent; 40-49 years old, 2.1 per cent; over 50 years old, 1 per cent. What is not known but may be interesting to monitor is whether the percentage of students over 21 years old is increasing.

Table 10 1983 Deans' Perceptions of the Effective Recruitment Methods Used to Maintain Student Enrollment (n = 216)

<u>Very Effective/Effective Recruitment Method(s) Used</u>	<u>n</u>	<u>% of Total</u>
Brochures Advertising Program		
Mailed to individuals and groups	173	80.1%
Included in exhibits/displays	146	67.6%
Faculty carry to meetings	108	50.0%
Dean carries to meetings	93	43.1%
Open house or career days at school of nursing	153	70.8%
Maintain relationship with nursing practice personnel	150	69.5%
Maintain relationship with high school counselors	144	66.6%
Nursing happenings published in general institution publication	144	66.6%
School of nursing newsletter/bulletins	124	57.4%
Provide health fairs for community	120	55.6%
Utilize pre-nursing counselors	97	44.8%
Participate in college career fairs	95	44.0%
Describe generic BSN program at exhibits	60	27.8%
Use alumni to recruit students	60	27.8%
Maintain relationship with NSNA about recruitment	44	20.4%
Radio announcements of special nursing events	41	19.0%
Posters about changes in nursing	36	16.7%
Provide school nurses information on BSN program	36	16.7%
Deans meet with alumni in distant areas to give update on nursing program	28	13.0%
TV announcements of special nursing events	22	10.2%
Use marketing firm to assist with recruitment	14	6.5%

C. Senior Student Reasons for Choosing a Baccalaureate Program

The 1984 senior student sample responded to a series of questions about their reasons for choosing a generic baccalaureate program in nursing. Table 11 lists students' perceptions of the most important reasons for choosing a baccalaureate nursing program.

Table 11 1984 Senior Students' Perceptions of the Most Important Reasons for Choosing a Baccalaureate Nursing Program (n = 743)

<u>Very Important/Important Reason(s)</u>	<u>n</u>	<u>% of Total</u>
Greater potential for personal and professional growth and development	693	93.3%
Career and educational mobility	688	92.6%
Personal motivation to acquire a college degree	666	89.6%
Status/opportunity of baccalaureate preparation for nursing practice	652	87.7%
Comprehensive scientific/liberal arts background to complement nursing knowledge	584	78.6%
Parents' expectation that you acquire a college degree	298	40.1%
Convenient location of BSN program	288	38.7%
Potential for nursing research	222	29.9%

Of note is the strong emphasis on personal and professional growth and development, and career and educational mobility perceived to be available from having a baccalaureate degree. Convenience of location and parental expectations about attaining a college degree were not prominent reasons, suggesting the students made a conscious choice in selecting their baccalaureate program.

Half the respondents had been contacted by or received information from another baccalaureate school prior to entering their program, and 40 per cent applied to more than one baccalaureate nursing program. Two-thirds did not consider entering a diploma or associate degree nursing program, while one-third did. Only 30 per cent of the student respondents (n = 224) indicated their baccalaureate program used any specific recruitment method that influenced their decision to enter that program. Of those so influenced, two-thirds identified brochures, letters and meetings as important, with lesser numbers (38 per cent) identifying a nursing school open house as important. These student responses tend to concur with the kinds and extent of recruitment strategies identified by deans.

Table 12 lists the most important recruitment methods perceived by 1984 senior students to have influenced their decision to enter their baccalaureate program.

Table 12 1984 Senior Students' Perceptions of Important Recruitment Methods That Influenced Their Decision to Enter A Baccalaureate Nursing Program (n = 224)

<u>Very Important/Important Recruitment Method(s)</u>	<u>n</u>	<u>% of Total</u>
Brochures	162	72.3%
Personal letter contact	143	63.8%
Personal meeting contact	130	58.0%
Nursing school open house	85	37.9%
College career fair	72	32.1%
Personal telephone contact	72	32.1%
Flyers	56	25.0%
Bulletins	53	23.6%
Nursing school health fair	36	16.1%
Magazine	24	10.7%
Posters	22	9.8%
Journals	21	9.4%
Radio announcement	11	4.9%
TV advertisement	8	3.6%

As can be seen in Table 13, 1984 senior students showed considerable variation in the time periods in which they made decisions to enter nursing.

Table 13 1984 Senior Students Report on the Time Periods in Which the Decision to Pursue an Education in Nursing was Made (n = 736)

<u>Time Period(s)</u>	<u>n</u>	<u>% of Total</u>
Prior to entering high school (8th grade or before)	125	17.0%
During the freshman year of high school (9th grade)	27	3.7%
During the sophomore year of high school (10th grade)	46	6.3%
During the junior year of high school (11th grade)	94	12.8%
During the senior year of high school (12th grade)	101	13.7%
During the first year of college	71	9.6%
During the second year of college	102	13.9%
One or more years after completing college education in another field	54	7.3%
Seven or more years after completing high school	41	5.6%

### SECTION III. INFORMATION TO ASSIST DEANS/FUTURE EMPLOYERS REGARDING NURSING SKILLS OF NEW GRADUATES

Four hundred and thirty-two students who participated in the 1984 student survey (n=749) responded in May 1985 to a follow-up questionnaire one year after graduation. The 1984 follow-up respondents provided data in these four areas: A) perceptions of their nursing skills at time of assuming first position in clinical nursing practice; B) frequency of application of theories, concepts, and principles in their nursing practice; C) involvement in patient care decisions; and D) actions undertaken when confronted by ethical dilemmas in clinical practice. It is hoped the information in this data base could be shared by deans with nursing service personnel to enhance dialogue about the preparation and employment of new graduates. Specifically, the terminal objectives of the curriculum could be compared with the agency's beginning level RN staff nurse job descriptions. If disparities exist about level of preparedness and/or focus of a professional nurse's role, the data base may provide objective information about the current theoretical and clinical preparation of generic baccalaureate students.

#### A. Perceptions of Nursing Skills at the Time of Assuming First Position in Clinical Nursing Practice

1984 follow-up respondents were asked about their general level of preparedness at the time they began work as professional nurses. Thirteen per cent of respondents felt very prepared, 59 per cent adequately prepared, 20 per cent minimally prepared, and 3 per cent felt unprepared. Table 14 presents respondents' perceptions of their preparedness of various nursing skills at the time they assumed their first professional nursing positions in clinical nursing practice. When respondents were asked to reflect back a year, they responded that they felt well prepared in interpersonal and communication skills, and generally well-prepared in clinical decision-making and organization/priority setting skills. More than one-third of the respondents felt themselves to be minimally or not prepared in technical nursing skills and two-thirds felt lack of preparation in computer skills.

**Table 14: 1984 Follow-Up Respondents' Perceptions of Their Preparedness in Performing Various Nursing Skills at the Time They Assumed Their First Clinical Nursing Position (n = 431)**

<b>Very Prepared/Prepared Nursing Skills</b>	<b>n</b>	<b>% of Total</b>
Therapeutic communication skills	388	90.0%
Interpersonal relations skills	385	89.4%
Charting/writing skills	383	88.8%
Speaking skills	371	86.0%
Physical assessment skills	351	81.5%
Patient teaching skills	346	80.3%
Organization/priority setting skills	310	71.9%
Problem solving/clinical decision-making skills	306	71.0%
Group process skills	306	71.0%
Technical nursing skills	239	55.4%
Computer skills	61	14.1%

**B. Frequency of the Application of Theories, Concepts, and Principles in Their Nursing Practice**

Table 15 reports on how frequently 1984 follow-up respondents applied various theories, concepts and principles in their nursing practice. Most of the content was identified as "Very Frequently" or "Frequently" used.

The six primary principles, concepts and/or theories cited by 85 per cent of the respondents as most frequently applied in their clinical nursing practice were: therapeutic communication principles (93 per cent), pathophysiology concepts (91 per cent), nursing diagnosis (87.1 per cent), nursing process (85.9 per cent), continuity of care of patients (85.6 per cent), and teaching/learning theory (85 per cent). Application of health promotion concepts (83.8 per cent), leadership principles (81.3 per cent) and ethical decision-making framework (75.3 per cent) also were well considered. Nursing research principles, role theory, and change theory were not as intensely applied but received attention. These last three principles and theories are not necessarily used on a daily basis but intermittently as the need arises. This may account for the lower rate of "Frequently" reported.

Table 15 1984 Follow-Up Respondents' Perceptions Regarding Application of Theories, Concepts, and Principles in Their Nursing Practice (n = 432)

<u>Very Frequent\Frequently Used Application of Theories, Concepts, Principles</u>	<u>n</u>	<u>% of Total</u>
Therapeutic communication principles	402	93.0%
Pathophysiology concepts	393	91.0%
Nursing diagnosis	376	87.1%
Nursing process	371	85.9%
Continuity of care principles	370	85.6%
Teaching/learning theory	367	85.0%
Health promotion concepts	362	83.8%
Leadership principles	351	81.3%
Ethical decision-making framework	325	75.3%
Stress management principles	323	74.8%
Legal principles in health care	312	72.2%
Cultural concepts	283	65.5%
Crisis intervention theory	263	60.8%
Growth & development principles	255	59.0%
Economic principles	231	53.5%
Nursing theory/model	221	51.2%
Change theory	212	49.1%
Role theory	209	48.4%
Nursing research principles	96	22.2%

### C. Involvement in Patient Care Decisions

The 1984 follow-up respondents' reported on their involvement in patient care decisions (see Table 16). Over 70 per cent of the respondents reported developing and implementing nursing care plans, making patient referrals, and giving primary care to patients. Approximately one-half of the graduates participated in patient rounds, coordinated discharge planning, or acted as team leaders. To date, less than 20 per cent of the respondents were members of nursing department committees and quality assurance committees. Some respondents reported that they were not eligible to serve on any nursing committees during their first year of employment.

Table 16 1984 Follow-Up Respondents' Involvement in Patient Care Decisions (n = 432)

<u>Patient Care Decision/Structure</u>	<u>n</u>	<u>% of Total</u>
Develop and implement nursing care plans	378	88%
Make patient referrals to social worker, clinical nurse specialist, chaplain, dietician, etc.	335	78%
Provide primary care for specific patients	303	70%
Participate in patient grand rounds and/or patient care conference	235	54%
Initiate and/or coordinate discharge planning with agency and/or community resources	214	50%
Act as team leader for care givers	209	48%
Coordinate the total care provided a patient(s) by a variety of health care providers	198	46%
Participate in discharge planning conference	150	35%
Organize and/or conduct classes for patient education	84	19%
Serve as a representative to nursing department committees	71	16%
Serve as a member of quality assurance committee	47	11%

D. Actions Undertaken When Confronted by Ethical Dilemmas in Clinical Practice

Dramatic changes in twentieth century medicine and technology have increased the emphasis and inclusion of ethics in nursing curricula. Nurse educators are concerned with the development of their students' capability to make ethical decisions that reflect sensitivity to ongoing complex alterations in health care. Providing quality human services underlies the philosophy and goal of professional nursing. Therefore, senior nursing students' appraisals of their ethical decision making abilities at the near completion of their programs and later after graduation when they are practicing in nursing would be beneficial.

In terms of making ethical decisions, nearly three-fourths of the 1984 senior students (n = 749) felt they were adequately prepared; the remainder felt minimally prepared. Seventy-two per cent of the 1984 follow-up respondents reported being involved in resolving ethical issues in their clinical practice. Most respondents reported being able to identify moral aspects of nursing care, gather relevant facts, use resources in clarification of the issues, and clarify and apply their own values in assessing and resolving an ethical issue. Close to one-half reported being active participants in resolving the issue; being able to propose, choose, and act on alternative actions; and evaluate the outcome. Ethical frameworks/models, theories and principles, laws about nursing practice, and the Code of Nursing Ethics were less commonly used. Table 17 lists the actions or activities most frequently taken by 1984 follow-up respondents when confronted by an ethical dilemma in their clinical practice.

Table 17 1984 Follow-Up Respondents' Actions/Activities Undertaken When Confronted by an Ethical Dilemma in their Clinical Practice (n = 432)

Action/Activity	<u>n</u>	<u>% of Total</u>
Able to identify the moral aspects of nursing	339	78.7%
Able to identify and utilize competent inter-disciplinary staff, personnel and resources to assist in the clarification and resolution of the dilemma	305	70.8%
Able to gather relevant facts relating to a moral issue	300	69.6%
Consciously clarify and apply personal values in assessing and resolving an ethical issue	299	69.4%
Able to propose alternative actions for resolving the dilemma	234	54.3%
Active participant in resolving the issue	226	52.4%
Evaluate the resolute action(s) taken	206	47.8%
Able to choose and act on a resolute action	191	44.3%
Consciously apply ethical theories and principles in resolving the dilemma	171	39.6%
Able to apply state/federal laws governing nursing practice in regard to the issue	168	39.0%
Consciously utilize the Nursing Code of Ethics to help guide actions	166	38.5%
Utilize an ethical framework/model to assist in the assessment and resolution of the dilemma	99	23.0%

The majority (greater than 74 per cent) of all respondents surveyed indicated that the most important factor in the development of their ethical decision-making skills was ethical content taught in nursing courses. Family influence was the second most frequently cited factor. Group discussion in seminars and on nursing units in clinical agencies also was highly valued. Unfortunately this last factor was not listed in the 1984 Student Survey so its exact ranking cannot be determined prior to graduation.

**SECTION IV. TYPES/PATTERNS OF COLLABORATION INVOLVING NURSING SERVICE STAFFS AND NURSING FACULTIES THAT CAN ASSIST STUDENT CLINICAL PRACTICE**

Collaboration in various forms between clinical agencies and schools of nursing increasingly has been seen by the parties involved and by the profession as important. Data was collected regarding: A) types of collaborative arrangements, B) perceived benefits from collaboration, and C) formal shared appointments of faculty between schools of nursing and nursing service agencies.

**A. Types/Patterns of Collaboration**

Table 18 displays areas of collaboration and the percentage of respondent schools that reported having these arrangements. Adjunct professorship arrangements and co-sponsorship of continuing education programs were the most widely reported types of arrangements.

Table 18 1984 Deans' Report on the Collaboration Between Nursing Faculty and Clinical Agencies (n = 246)

<u>Types of Collaboration</u>	<u>n</u>	<u>% of Total</u>
Adjunct professorship arrangements with clinical agencies	162	66%
Cosponsorship of professional nursing continuing education program(s)	162	66%
Research involving clinical nursing studies	140	57%
Collaboration to examine current trends/issues in health care and the implications on nursing education and employment	120	49%
Projects to increase the utility of limited grants and funding sources available in nursing	44	18%
Development of new practice roles for nurses in alternative care systems	34	14%

**B. Benefits Received From Collaboration**

Of the generic baccalaureate programs participating in the Project, 51 per cent (n = 125) had formal reciprocal arrangements with clinical agencies. Another 10 per cent (n = 16) were planning to make agreements in the near future. Among the schools with these arrangements, 54 per cent were universities, 24 per cent were academic health centers, and 22 per cent were four year colleges.

An analysis of perceived benefits believed to occur with collaborative arrangements (n = 125) is found in Table 19. In general, the deans found collaborative arrangements enhanced communication and networking with agencies, assisted in the clinical placement of students, and enhanced faculty, nursing staff, and student satisfaction.

Table 19 1984 Deans' Report on the Benefits Perceived by Schools from Collaborative Efforts With Nursing Service (n = 125)

<u>Benefit(s)</u>	<u>n</u>	<u>% of Total</u>
Enhanced communication network with clinical agencies	118	94%
Maintained student clinical placements with agencies	115	92%
Enhanced service staff and faculty satisfaction and recognition	111	89%
Enhanced nursing student satisfaction and learning with clinical experiences	106	85%
Increased nursing research endeavors	101	81%
Increased community and political networking	99	79%
Enhanced nursing image in the community	91	73%
Increased influenced and participation on health care policy making in geographical area	83	66%
Enhanced staff productivity and influence on patient outcomes	74	59%
Fostered cost containment through sharing of resources	67	54%

C. Shared Appointments of Faculty

Many collaborative arrangements have been achieved through joint or shared faculty appointments between schools of nursing and nursing service agencies. Twenty-eight per cent (n = 68) of the 1984 deans responded that their schools have formal joint appointment arrangements. These arrangements primarily involve clinical specialization and teaching roles. Research and teaching role combinations were also frequently reported. Thirteen per cent of all faculty teaching on the baccalaureate level in these 68 schools hold shared appointments.

## **SECTION V. SENIOR NURSING STUDENTS PERCEPTIONS/REACTIONS CONCERNING THEIR BACCALAUREATE PREPARATION**

To provide baccalaureate programs with national information concerning student reaction to their education, data were collected in the following areas: A) recruitment, B) course work in liberal arts and science disciplines and the degree of importance of courses to clinical practice, C) satisfaction with nursing/nonnursing course work and support services, D) development of clinical nursing skills, and E) perceptions of professional and personal growth since entering their nursing program.

### **A. Recruitment**

A series of questions was asked about specific influences on students' choice of their baccalaureate nursing program. Fifty-six per cent of the 1984 respondents identified parents as the most important influence followed by friends and a nurse. Recruiters/advisors were reported as important by 14 per cent of the students. Only 30 per cent of 1984 respondents indicated that their baccalaureate program used any specific recruitment method that influenced their decision to enter that program. The three most important strategies identified were brochures (66 per cent), personal letters (64 per cent) and personal meetings (58 per cent). The 1985 participants also identified brochures (52 per cent), personal letters (24 per cent) and academic advisory system (24 per cent) as strategies used in publicizing their program. These responses tend to concur with the kinds and extent of recruitment strategies identified by responding deans (see Table 10). Forty-two per cent of 1984 participants and 40 per cent of 1985 participants applied to more than one baccalaureate program. Two-thirds of 1984 respondents did not consider entering a diploma or associate degree nursing program. Ninety-four per cent of 1985 respondents indicated their knowledge about the differences among types of nursing programs influenced them in choosing a baccalaureate program. They indicated they primarily learned about the differences in types of nursing programs from professional nurses (56 per cent) and pamphlets about nursing programs (45 per cent).

### **B. Course Work in Liberal Arts and Science Disciplines**

The essence of university nursing education is a carefully balanced curriculum of liberal and professional education. Course work in the liberal arts undergirds professional courses, as well as provides a broad, general, liberalizing education.

Table 20 summarizes various courses offered in baccalaureate nursing curriculums and the perceptions of 1984 senior students who completed the courses. For each course completed, information was collected from the 1984 senior students about whether the course was required or elective and its importance towards nursing clinical practice.

In terms of frequency, psychology, the biological sciences, literature/English, sociology, and research and statistics were most commonly completed. The next most frequently required courses were mathematics and the physical sciences, followed by history/political science, philosophy/ethics/logic and writing. Courses in economics and computer technology were seldom required but were elected by some respondents. Students were most clearly able to see the clinical

application of biological sciences and psychology (96-97 per cent of students rating them very important or important), management and legal (93-94 per cent), health care/legislative policy (89 per cent) and sociology and writing course work (84 per cent). Students were most dubious about the importance of history/political science and economics to nursing clinical practice.

Table 20 1984 Senior Students' Report on Nonnursing Courses Including Completion of Courses, Required versus Elective Courses, and the Importance of Courses to Clinical Practice (n = 749)

<u>Nonnursing Course(s)</u>	<u>Yes, Have or Will Complete Course</u>		<u>If Yes, Was the Course Required</u>		<u>Very Important/ Important Application to Clinical Practice</u>	
	<u>n</u>	<u>% of Total</u>	<u>n</u>	<u>% of Yes</u>	<u>n</u>	<u>% of Yes</u>
Social Sciences						
Psychology	713	95.2%	676	94.8%	686	96.2%
Sociology	684	91.3%	607	88.7%	568	83.0%
Anthropology	301	40.2%	187	62.1%	133	44.2%
Scientific & Mathematical						
Biological Sciences	702	93.7%	680	96.9%	684	97.4%
Physical Sciences	602	80.4%	535	88.9%	480	79.7%
Mathematical	575	76.8%	453	78.8%	396	68.8%
Liberal Arts & Humanities						
Literature/English	697	93.0%	620	88.9%	480	68.9%
History/Political Science	540	72.0%	356	65.9%	140	25.9%
Philosophy, Ethics, Logic	515	68.7%	393	76.3%	336	65.3%
Writing	491	65.5%	400	81.5%	404	82.3%
Speech	350	46.7%	255	72.8%	285	81.4%
Economics	128	17.0%	41	32.0%	44	34.4%
Research & Statistics	632	84.4%	573	90.7%	450	71.2%
Management	374	50.0%	326	87.2%	351	93.8%
Health Care/Legislative Policy	364	48.6%	311	85.4%	321	88.2%
Legal	231	30.8%	186	80.5%	215	93.2%
Computer Technology	117	15.6%	30	25.6%	97	82.9%

### C. Satisfaction with Nursing and Nonnursing Courses and Support Services

Student satisfaction with a variety of nursing and nonnursing courses and support services may be found in Table 21. The percentiles in the table were based upon those who answered the specific item.

Over three-fourths of the students were very satisfied/satisfied with clinical and nonclinical nursing courses and the liberal arts, social science, scientific, and mathematical courses. Dissatisfaction with courses was less than 11 per cent in all cases except for computer courses (38 per cent).

In terms of support services, students were most satisfied with faculty making time available to discuss class work, advisement, and library and laboratory facilities. Students were dissatisfied less than 15 per cent with the support services except for job placement services (27.5 per cent), career counseling (18.9 per cent) and financial aid services (18.0 per cent). It is interesting to note that economic rather than academic support services appeared to provide the greatest areas of dissatisfaction.

When students were asked about the importance of concepts taught within their nursing courses, 91 per cent of the 1984 seniors reported that they had learned/applied a nursing conceptual/theoretical framework to planning and giving patient care, and 95 per cent of the students felt the framework was effective or very effective. Ninety-eight per cent of the students said their nursing knowledge in general was greatly improved or improved since beginning their baccalaureate program. Ninety-one per cent of the seniors believed their job related skills were greatly improved or improved despite rating satisfaction with job placement services and career counseling as low.

Table 21 1984 Senior Students Ratings of Satisfaction with Nursing and Nonnursing Courses and Support Services

<u>Course Area/Service</u>	<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Minimally Satisfied</u>	<u>Not Satisfied</u>	<u>n</u>
Nursing courses					
Clinical courses/experiences	259 36.3%	301 42.2%	124 17.4%	29 4.1%	713
Physical assessment/courses course work	193 27.7%	300 43.0%	153 21.9%	52 7.4%	698
Nonclinical courses in nursing major	154 21.8%	422 59.6%	110 15.5%	22 3.1%	708
Nonnursing courses					
Liberal arts/humanities	184 27.3%	395 58.5%	87 12.9%	9 1.3%	675
Social sciences	182 26.8%	390 57.5%	97 14.3%	9 1.3	678
Scientific & mathematical	172 25.6%	387 57.7%	103 15.4%	9 1.3%	671
Research/statistics	99 15.5%	290 45.3%	181 28.3%	70 10.9%	640
Management	82 19.1%	215 50.0%	100 23.3%	33 7.7%	430
Health care/legislative policy	66 14.6%	215 47.5%	130 28.7%	42 9.3%	453
Legal	58 18.2%	149 46.7%	80 25.1%	32 10.0%	319
Computer	20 11.6%	52 30.2%	35 20.3%	65 37.8%	172
Support services					
Availability of faculty to discuss class work	275 38.6%	322 45.2%	90 12.6%	25 3.5%	712
Library facilities	208 29.3%	264 37.2%	157 22.1%	80 11.3%	709
Personal advisement	177 27.1%	286 43.7%	123 18.8%	68 10.4%	654
Academic advisement	166 23.5%	291 41.3%	159 22.6%	89 12.6%	705
Laboratory facilities	162 23.1%	362 51.6%	139 19.8%	39 5.6%	702
Extracurricular activities	139 24.2%	285 49.7%	87 15.2%	63 11.0%	574
Campus social life	136 24.0%	260 45.9%	93 16.4%	77 13.6%	566
Campus health services	120 19.7%	278 45.6%	131 21.5%	80 13.1%	609
Financial aid services	112 21.5%	197 37.7%	119 22.8%	94 18.0%	522
Student housing	95 24.0%	203 51.3%	56 14.1%	42 10.6%	396
Career counseling	72 13.2%	215 39.4%	156 29.6%	103 18.9%	546
Tutorial assistance	70 19.1%	165 45.0%	78 21.3%	54 14.7%	367
Job placement services	51 11.8%	138 31.9%	124 28.7%	119 27.5%	432

#### D. Development of Clinical Nursing Skills

Table 22 summarizes the student clinical experiences as reported by the 1984 senior nursing students. As can be seen, medical-surgical, obstetrics, pediatrics, and community health experiences predominated with a greater than 85 per cent completion rate. Because the focus of many baccalaureate programs is not on special care units, experiences in the emergency room and intensive care units were not as frequent. Many other nonhospital settings are being utilized. However, not every setting is used by each program. In summary, the traditional hospital settings still predominate for student clinical experiences.

The mean number of clinical days in each area was calculated only for those students who had completed an experience. The mean range was from 3.5 days in the neonatal ICU to 27 days in medical-surgical settings. The longest number of days were spent in hospital settings except for community health nursing (16 days).

In looking at student satisfaction with orientation to each clinical experience completed, three-fourths of the students were satisfied. Again the lowest percentiles occurred in the special care areas which are technically complex and not always appropriate for baccalaureate students. In addition, students reported the least number of clinical days in these specialty areas.

The students reported that their nursing skill development was strongest in those clinical areas in which they had the most experience; that is, medical-surgical (88.6 per cent), community health (83.1 per cent), and psychiatry (80.1 per cent). Again, strong technical skill development was not as frequent in the specialty areas such as ICU/CCU (60.6 per cent), neonatal ICU (46.9 per cent) and emergency room (48.3 per cent).

Table 22 1984 Senior Students' Report on Their Completed Clinical Experiences Including Mean Number of Days, Satisfaction with Orientation, and Skill Development for Each Area (n = 749)

Clinical Sites	Had Clinical Experience		Approximate Mean Number of Clinical Days 1 Day=8 hours	Very Satisfied/Satisfied with Orientation		Very Strong/Strong Skill Development	
	n	% of Total		n	% of Total	n	% of Total
Medical-surgical	683	91.2%	27.0 days	629	92.1%	605	88.6%
Obstetrics	677	90.4%	13.0 days	574	84.8%	513	75.8%
Pediatrics	662	88.4%	14.5 days	573	86.5%	520	78.5%
Psychiatry	657	87.7%	14.5 days	572	87.1%	526	80.1%
Community health	646	86.3%	16.0 days	557	86.2%	537	83.1%
Outpatient clinics	468	62.5%	6.5 days	371	79.2%	305	65.2%
ICU/CCU	465	62.1%	6.6 days	347	74.6%	282	60.6%
Nursing homes	341	45.6%	9.0 days	295	86.5%	262	76.8%
Neonatal ICU	277	37.0%	3.5 days	205	74.0%	130	46.9%
Emergency room	201	26.9%	4.0 days	151	75.1%	97	48.3%
Extended care facility	175	23.4%	8.6 days	147	84.0%	131	74.9%
Hospice	43	5.7%	4.0 days	41	95.3%	29	67.4%

E. Professional and Personal Growth Since Entering Their Nursing Program

Students were asked to compare their current skills, knowledge, and abilities with those they possessed at entry to the nursing program. The data in Table 23 show that students felt "Improved" or "Greatly Improved" in most areas. As expected, over 90 per cent of the respondents reported most improvement in nursing and general academic knowledge. Interpersonal, communication, and job related skills were equally cited as improved by 91 per cent of the students. The motivation to continue education after graduation was identified as the least improved area. Whether these students had intended to pursue advanced education at the time of entry into the baccalaureate program is unknown. It is unclear whether the ability to write and speak clearly did not improve as much as in other areas because these abilities were high on admission, or if nearly 30 per cent of these students are leaving college with writing and speaking skills minimally improved over high school level. Table 20 did reveal that 66 per cent of the students completed a formal writing course (required of 55 per cent), and 47 per cent a speech course (required of 35 per cent).

Table 23 1984 Senior Students' Perceptions of Professional and Personal Growth Since Entering Their Nursing Program (n = 744)

<u>Greatly Improved/Improved Areas of Growth</u>	<u>n</u>	<u>% of Total</u>
Nursing knowledge in general	726	97.6%
General academic knowledge	693	93.2%
General knowledge about living, life and self	683	91.8%
Communication skills	682	91.6%
Interpersonal skills	680	91.4%
Job related skills	677	91.0%
Self-awareness: ability to identify strengths and weaknesses	673	90.5%
Analytical problem solving skills	643	86.5%
Leadership skills	636	85.5%
Commitment to a nursing career	627	84.3%
Attitudes, values and personal qualities	624	83.8%
Confidence in academic abilities	608	81.8%
Cultural awareness and appreciation	587	78.9%
Ability to speak clearly	531	71.4%
Ability to write clearly	516	69.4%
Motivation to continue education after graduation	505	67.9%

**SECTION VI. STRATEGIES EMPLOYED TO ASSESS/ASSIST STUDENT PERFORMANCE ON STATE BOARDS/NCLEX-RN EXAMINATION**

Specific data were collected about predictors for successful performance on the NCLEX-RN examination and strategies provided and used by senior students to prepare for the NCLEX-RN examination. The topics surveyed in the deans', students' and follow-up questionnaires (1983-1986) included: A) predictors of successful student performance on NCLEX-RN examination, B) strategies provided and used by senior students to prepare for the NCLEX-RN examination, and C) 1984 follow-up respondents' perceptions about preparation and relevancy of the NCLEX-RN examination.

**A. Predictors of Successful Student Performance on NCLEX-RN Examination**

In the 1984 Deans' Survey, 42 per cent (n = 103) of 246 deans reported that their schools conducted longitudinal studies to determine the best predictors for successful performance on the NCLEX-RN exam. The best predictors, as determined by deans at their individual schools, were identified as nursing course grades; GPA-pre-nursing courses, especially science courses; SAT verbal score; and SAT math score. Other factors identified as important predictors can be seen in Table 24. As can be seen college performance is much more important than high school performance.

Table 24 1984 Deans' Report on Predictors of Successful Student Performance on the NCLEX-RN Examination (n = 103)

Predictor	Degree of Importance				Not		No	
	Important		Minimally Important		Applicable		Response	
	n	% of Total	n	% of Total	n	% of Total	n	% of Total
Nursing course grades	84	82%	6	6%	0	0%	12	20%
GPA-Science grades in college	74	72%	7	7%	1	1%	21	20%
GPA-Pre-nursing courses	67	65%	6	6%	7	7%	23	22%
SAT verbal score	54	50%	3	3%	18	18%	30	29%
SAT math score	45	44%	8	8%	17	16%	33	32%
GPA-high school	39	38%	17	17%	16	15%	31	30%
NLN (Comprehensive Nursing Achievement Test)	35	34%	10	10%	27	26%	31	30%
NCLEX-RN Diagnostic Test	33	32%	4	4%	26	25%	40	9%
High school science grades	33	32%	13	13%	21	20%	36	35%
ACT-English score	32	31%	7	7%	27	26%	37	36%
ACT-math score	30	29%	9	9%	26	25%	38	37%
ACT-science score	29	28%	7	7%	29	28%	38	37%
High school rank	22	21%	26	25%	20	19%	35	35%

B. Strategies Used by Senior Nursing Students to Prepare for the NCLEX-RN Examination

The type of strategies employed by senior nursing students in 1984 (n = 634) and strategies employed by students in 1985 (n = 718) to prepare for the NCLEX-RN examination are compared in Table 25. Review of commercially prepared diagnostic tests was very popular.

Table 25 A Comparison of Specific Strategies Employed to Prepare for the NCLEX-RN Examination by Senior Students in 1984 (n = 634) versus Senior Students in 1985 (n = 718)

<u>NCLEX Preparation Strategies</u>	<u>1984 Student Survey</u>		<u>1985 Student Survey</u>	
	<u>n</u>	<u>% of Total</u>	<u>n</u>	<u>% of Total</u>
Review class notes/exams	-	-*	561	78%
Use commercial diagnostic tests (i.e. Mosby's, Assess-a-Test)	351	56%	488	68%
Use diagnostic standardized national nursing achievement test given at school of nursing	-	-*	427	59%
Attend special NCLEX-RN preparatory classes/courses	167	26%	416	58%
Attend a class by your school on test-taking strategies for a standardized exam	-	-*	141	20%
Other (review books, study group, etc)	185	25%	102	14%

\* Not included in 1984 Survey

C. 1984 Follow-Up Respondents' Perceptions About Preparation/Relevancy of NCLEX-RN Examination

1984 follow-up respondents revealed that 52 per cent had attended a special NCLEX-RN preparation class/course. Eighty per cent of the respondents were satisfied with their level of preparedness for taking the NCLEX-RN exam. When asked to check those strategies that they would recommend using to prepare for taking the NCLEX-RN exam, 80 per cent checked commercial diagnostic tests/review books. See Table 26 for additional strategies recommended by respondents.

**Table 26 1984 Follow-Up Respondents' Recommendations of Specific Preparatory Activities for Taking the NCLEX-RN Examination (n = 432)**

<b>Activity</b>	<b>n</b>	<b>% of Total</b>
Utilise commercial diagnostic tests/review books	345	80%
Attend special NCLEX-RN preparation classes/courses	213	49%
Review class notes/exams	184	43%
Take a diagnostic standardized national nursing achievement test offered by your school of nursing	166	38%
Attend a class on test-taking strategies for a standardized exam	122	28%

About one-half of the 1984 follow-up participants responded that the NCLEX-RN exam was generally indicative of the knowledge and skills needed by a beginning level baccalaureate prepared nurse. See Table 27 for other perceptions about the NCLEX-RN examination.

**Table 27 1984 Follow-Up Respondents' Perceptions About the NCLEX-RN Examination (n = 432)**

<b>Perception(s)</b>	<b>n</b>	<b>% of Total</b>
The NCLEX-RN exam questions reflected the content taught in nursing program	212	49%
The NCLEX-RN exam questions were indicative of what a beginning level baccalaureate prepared nurse should be able to do in clinical practice	188	44%
The NCLEX-RN exam questions were not indicative of the theoretical knowledge a beginning level baccalaureate prepared nurse should have to practice safe nursing care	123	29%
The NCLEX-RN exam questions do not reflect the clinical decisions a beginning level baccalaureate prepared nurse must make	107	25%

Hopefully listing predictors for successful performance on the NCLEX-RN exam and noting specific strategies used to enhance student performance will be helpful to those schools who may be experiencing difficulties now or in the future with students passing the NCLEX-RN examination.

**SECTION VII. TECHNIQUES EMPLOYED BY SCHOOLS TO SUCCESSFULLY PROVIDE CLEAR, CONCISE, FACTUAL INFORMATION ABOUT BACCALAUREATE NURSING PROGRAMS TO A VARIETY OF PUBLICS**

There is a need for the public to understand who a professional nurse is, how they are educated, and what they do. Questions were asked in the 1983 and 1984 Deans' Surveys regarding their perceptions on how to present a clear and positive image of the professional nurse. Deans were asked for their suggestions in regard to increasing the public's awareness and recognition of the value of baccalaureate preparation for nursing practice. Data were collected regarding: A) the main hurdles faced by generic baccalaureate programs, and B) activities to describe the value of baccalaureate prepared nurses to a variety of publics.

**A. Main Hurdles Faced by Generic Baccalaureate Programs**

Enrollment in baccalaureate programs in nursing (generic and RN) is now about 40 per cent of the enrollment in all RN-preparing programs; 20 years ago, it was 21 per cent (NLN). Most responding deans (89 per cent) agreed that generic baccalaureate programs have remained a minority within the field of nursing. Table 28 presents respondents' perceptions of the main hurdles faced by generic baccalaureate programs. It reflects strong agreement that the major hurdles have been a lack of agreement within the profession about the three types of nursing preparation and the impact of economic issues.

Table 28 1983 Deans' Perceptions of Important Hurdles Faced by Generic Baccalaureate Programs (n = 194)

<u>Very Important/Important Hurdle(s)</u>	<u>n</u>	<u>% of Total</u>
AD nurses have same licensure as diploma, BSN nurses	186	95.9%
Failure to educate consumers about differences in nursing preparation	183	94.3%
Disagreement among nursing leaders as to what constitutes preparation for professional nursing	177	91.2%
Nursing shortages that led to non-discriminate employment of all three types of educationally prepared RNs for the same position	174	89.7%
Negative attitudes from directors of nursing practice about BSN nurses related to their own backgrounds	173	89.2%
Influence exerted by the hospital administrative structure relating to costs and power	167	86.0%
Historical entrenchment of the hospital schools	158	81.5%
Omission of word technical in describing ADN prepared nurse	154	79.4%
Economic issues forcing the selection of the least costly nursing education program	149	76.8%

Baccalaureate education for nursing practice is now endorsed by official statements from four major nursing organizations—AACN, ACNE, ANA, and NLN—as well as specialty nursing groups. In addition, the report from National Commission on Nursing included the statement that baccalaureate education for nursing was achievable. The commission recommended that more education for nurses at both baccalaureate and graduate levels be encouraged (NCN). While nearly all respondents felt this progress should be interpreted more positively to nursing and nonnursing communities, only about half believed that this support would help to dispel the "nurse is a nurse is a nurse" image. More definitive approaches such as separate licensure for the baccalaureate prepared nurse and requiring baccalaureate preparation as the minimum entry level for professional nursing practice were suggested.

**B. Techniques Utilized to Describe the Value of Baccalaureate Education**

In the 1984 Deans' Survey, three-fourths of the schools (n = 178) reported being involved in activities to inform the public about the value of the baccalaureate prepared nurse. The most frequently used techniques are listed in Table 29. Additional activities reported by deans included: meetings with community leaders, local hospital boards, and/or high school counselors; sponsoring job fairs/career days; publishing of articles; preparing displays about nursing to be placed in the community; and offering health care courses to general college students on topics such as stress, nutrition, and planning for health.

Table 29 1984 Deans' Report on the Nursing School  
Techniques Utilized in Describing to a  
Variety of Publics the Value of the  
Baccalaureate Prepared Nurse (n = 178)

<u>Techniques</u>	<u>n</u>	<u>% of Total</u>
Offered Community Health Fairs	152	85%
Prepared materials on baccalaureate nursing education for high school counselors	116	65%
Actively involved with legislators to lobby on nursing education/practice issues	112	63%
Worked collaboratively with nursing organizations on image projects	88	49%
Met with administrators of health-care organizations to discuss the merits of hiring baccalaureate-prepared nurses	84	47%
Worked collaboratively with the baccalaureate nursing programs	62	35%
Developed/participated in community program(s) (radio, TV, public forums) to advertise the value of baccalaureate nursing	47	26%
Received funds to study and/or develop programs to examine the image of baccalaureate nursing	5	3%

## **SECTION VIII. SOURCES OF SATISFACTION/DISSATISFACTION WITH NURSING EMPLOYMENT ONE YEAR AFTER GRADUATION**

The main purpose of the 1984 Follow-up Survey (n = 432) was to obtain information about student transition to clinical practice. The main areas covered were: A) job market, salary and type of agency selected after graduation, and B) level of satisfaction with job factors one year after graduation.

### **A. Job Market, Salary, and Type of Agency Selected After Graduation**

Nearly all 1984 follow-up respondents (96 per cent) reported being employed as an RN at the time of the survey. Most respondents (73 per cent) reported having no difficulty finding their first RN position. When they first started working as RNs, respondents (n = 396) reported earning a mean average salary of \$9.24 per hour (SD 1.20). Two-thirds reported their employer did not give a pay differential for a baccalaureate degree; of those that did, the average was five per cent above the base salary for a beginning level RN. Most 1984 follow-up respondents (47 per cent) were employed in medical center hospitals. The majority reported working on a medical-surgical unit in a hospital setting for their first position. Those taking second positions frequently chose a special care area or community health/home health setting.

### **B. Level of Satisfaction with Job Factors**

At one year after graduation, two-thirds of the respondents were in their original jobs, while 28 per cent had had two positions and 3 per cent three or more. The two most frequent reasons given for changing positions were dissatisfaction with previous position (34 per cent), and moving to another geographical area (25 per cent).

Table 30 presents 1984 follow-up respondents' level of satisfaction with various job components at their place of employment. The opportunity to work as peers with other health team members, the quality of care provided at the institution, and the institution's philosophy were the major sources of satisfaction reported. The factors with which they were least satisfied were staffing patterns and opportunity for promotion/advancement. When asked about organization of nursing care, 74.6 per cent of 1984 follow-up respondents were "Very Satisfied" and "Satisfied" with primary care versus 63.3 per cent of the 1984 follow-up respondents with team nursing. Please refer to Section III regarding 1984 follow-up respondents' assessment of their level of clinical skills and involvement in patient-care decisions.

Table 30: 1984 Follow-Up Respondents' Ratings of Satisfaction with Job Factors (n = 431)

Very Satisfied/Satisfied Factor(s)	<u>n</u>	% of <u>Total</u>
Opportunity to work as a peer with other health team members	346	80.2%
Quality of care provided at institution	333	77.2%
Philosophy of institution complements personal/professional philosophy	318	73.7%
Fringe benefits (vacation, holidays, health insurance, sick leave)	312	72.4%
Orientation	296	68.7%
Opportunity to work to full potential	277	64.2%
Opportunity for promotion, advancement	185	42.9%
Open communication channels	236	54.8%
Support of supervisory personnel	252	58.5%
Opportunity to participate in decision-making	255	59.1%
Continuing education/in-service programs	271	62.9%
Good salary and compensation	263	61.0%
Retirement plans	226	52.4%
Tuition-reimbursement program	220	51.0%
Job sharing	219	50.8%
Staffing patterns	189	43.8%

## SUMMARY

To accomplish the primary purpose of the Generic Baccalaureate Nursing Data Project, information was collected in a number of areas that included recruitment, system interrelationships (institution, community, and/or clinical agencies), student development, career plans, and student transition into clinical practice. AACN member deans and representative samples of their senior nursing students provided the data necessary to successfully carry out the objectives of the Project. To make the data available and accessible to a variety of constituents, the findings have been published in a major summary report, journal articles, and presented at national professional meetings.

The findings at the time of these surveys (1983-1985) indicated that generic baccalaureate programs were having no difficulty recruiting nursing students and that enrollment levels were being maintained. No marked differences in the quality of applicants for their programs over the two-year period were noted. Most schools did not utilize vigorous recruitment strategies but relied on general services of the institution. An examination of important recruitment strategies used by schools revealed that over 50 per cent of the deans did the following: published brochures and bulletins about their program; hosted open houses, career days, health fairs and/or other nursing events; and promoted relationships with high school counselors, institution recruiters, and nursing service personnel.

In looking at interrelationships, most deans believed their schools had a good relationship with their parent institution, were given funds equivalent to other similar size programs, and had adequate funds to meet their program needs. They believed that making the community more aware of the value of the baccalaureate prepared nurse was important for the long term survival of generic baccalaureate programs. Reciprocal arrangements with clinical agency personnel have been very valuable in promoting communication, conserving scarce resources, and improving clinical experiences for students. In turn, both professional nurses and faculty have been able to enhance their professional development which impacts positively on the reputation of the school. The recent trends in health care, especially prospective payment reimbursement, have impacted on schools and will likely influence some changes in curricula and clinical experiences of future nursing students.

To develop a data base that would assist administrators in current and future academic planning, it was important to survey senior students' perceptions of their personal and professional growth and development, at the completion of their program. In addition, career goals, job opportunities, and potential adjustments to new professional nursing roles were explored. The majority of students reported growth and development in all general and nursing academic areas indicating satisfaction with their courses. An exception was in the area of computers, which appears to be at an elementary stage of development in most nursing schools. In regard to career preparation, students did not perceive job placement services or career counseling at the institution to be that helpful. Respondents indicated that they received some job related information through nursing courses or self study.

Most follow-up respondents felt prepared for their first clinical position; they were usually working in hospital settings on medical-surgical units. The follow-up respondents reported frequently applying therapeutic communication principles, pathophysiology concepts, nursing diagnosis, nursing process, continuity of care principles, and teaching/learning theories in clinical practice. They indicated they were involved in developing and implementing nursing care plans, giving primary care to patients and making patient referrals. In terms of job satisfaction, they rated opportunities to work as a peer with other health team members and quality of care rendered at the institution very highly. They were least satisfied with staffing patterns and opportunity for promotion advancement.

The Generic Baccalaureate Nursing Data Project provided a valuable opportunity to initiate and document a national data base on the educational preparation of the professional nurse. Although these findings are fairly comprehensive and indicative of recent happenings in generic baccalaureate nursing programs, they represent an initial beginning and will only remain relevant through an ongoing monitoring system.