

**MEETING FUTURE NURSING NEEDS OF NEW YORKERS:
THE ROLE OF THE STATE UNIVERSITY OF NEW YORK**

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Prepared For

The Office of the Provost
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PREFACE

This report presents the findings, conclusions and recommendations of a study of the Registered Nurse (RN) workforce in New York State by the Center for Health Workforce Studies at the University at Albany (the Center). This study is designed to help planners and policy makers understand the supply, demand and distribution of RNs in New York, and to formulate policies for future training programs for RNs.

This study was undertaken at the request of the Office of the Provost of the State University of New York (SUNY). The Provost's Office is responsible for a range of educational policies and programs for the University. The SUNY educational system is a large and diverse system that encompasses 64 campuses, including 2 health science centers, 4 university centers, 13 four-year colleges, 6 technical colleges, and 30 community colleges. Within the SUNY system, nursing education is one of the largest areas of education, with programs in nursing being offered at 41 of the universities and colleges. In 1998-99, there were an estimated 2,516 graduates of SUNY nursing programs. The study of Registered Nursing was designed to assist the Office of the Provost and the University develop policies to better serve the needs of students, faculty, the SUNY system, and most important, the millions of New Yorkers who are cared for by the graduates of SUNY's many nursing programs.

The data presented and analyzed in the report are from a number of sources, including: the Integrated Postsecondary Education Data System (IPEDS) maintained by the National Center for Education Statistics; a survey conducted by the Center of nursing school deans in New York State; a survey conducted by the Center of RNs recently licensed to practice in New York; a Center survey of recent graduates of SUNY BSN completion programs in New York; the US Census Bureau; data from the State Education Department on pass rates on the nurse licensing examination; and internal files maintained by the Center.

The report was prepared by Haven Battles, Paul Wing, and Edward Salsberg of the Center. Assistance was provided at several points in the study by Michael Dill, Simon Balint, Mark Beaulieu, Vicki Myers and Tara Leonard. The Center also received expert guidance from Christine Kovner, RN, Ph.D. and Carol Brewer, RN, Ph.D.

The Center for Health Workforce Studies is a not-for-profit research center operating under the auspices of Health Research Incorporated (HRI) and the School of Public Health at the University at Albany, State University of New York. Funding and guidance for the project was provided by the State University of New York. Additional resources provided by the Federal Health Resources and Services Administration (HRSA) are gratefully acknowledged. The ideas expressed in this report are those of the Center, and do not necessarily represent the views or positions of the State University of New York, the School of Public Health, the University at Albany, HRI, or HRSA.

TABLE OF CONTENTS

Executive Summary	ES-1
Findings.....	ES-2
Recommendations.....	ES-15
Chapter 1. Nursing Education Trends in New York State.....	1-1
Nursing Programs by Institutional Sector.....	1-3
Demographic Characteristics of RN Graduates.....	1-6
Future Trends	1-12
NCLEX Scores.....	1-15
Chapter 2. Characteristics and Employment Experiences of Newly Licensed RNs in New York State.....	2-1
Demographic Characteristics by Educational Level and Sector.....	2-4
Education and Training.....	2-9
Practice Characteristics.....	2-16
Assessment of Job Market	2-21
Chapter 3. Characteristics and Employment Experiences of SUNY BSN completed in New York State.....	3-1
Demographic Characteristics	3-3
Educational Characteristics.....	3-4
Practice Setting	3-6
Job Market Indicators	3-6
Chapter 4. The Nursing Workforce in New York State Regions	4-1
Regional Analysis	4-3
Job Market Experiences of Newly Licensed RNs	4-6
Future Nursing School Applications Anticipated by Nursing School Deans.....	4-10
Steps Toward More Effective Regional Planning	4-13
Appendix A. SUNY RN Advisory Committee.....	A-1
Appendix B. 1999 Survey of Recently Licensed Registered Nurses in New York State.....	B-1
Appendix C. Nursing School Dean “Fax Back” Survey.....	C-1
Appendix D. Survey of RNs Completing Baccalaureate Programs in New York State.....	D-1

LIST OF EXHIBITS

Exhibit ES-1. Undergraduate Nursing Education Program Awards in New York State by Award Type, 1990-91 to 2000-01.....	ES-5
Exhibit ES-2. Age Distribution of RNs in New York State Employed in Nursing, 1973 to 1995	ES-6
Exhibit ES-3. Job Market Experiences of Newly Licensed RNs in New York State, Bachelors and Associate Degree Graduates, 1999	ES-7
Exhibit ES-4. Assessments of Adequacy of Training by Bachelors and Associate Degree Graduates	ES-8
Exhibit ES-5. Nursing Education Awards in New York State by Institutional Sector, 1998-99	ES-9
Exhibit ES-6. RN Awards & Programs, Regents Regions, 1998-99	ES-11
Exhibit ES-7. Age, Presence of Children ant Home and Race by SUNY Sector	ES-12
Exhibit ES-8. Geographic Area Most Familiar with Job Market, by SUNY Sector	ES-13
Exhibit ES-9. NCLEX Pass Rates in New York State by Institutional Sector, Q1 1997 through Q3 1998	ES-14
Exhibit 1-1. Total Nursing Education Program Graduates by Type of Award, NYS, 1990-91 to 2000-01	1-2
Exhibit 1-2. Undergraduate Nursing Program Graduates in NYS by Award Type, 1990-91 to 2000-01	1-2
Exhibit 1-3. Percentage Change in Associate and Bachelors Degrees in Nursing in NYS, 1990-91 to 1995-96, 1995-96 to 1998-99, and 1998-99 to 2000-01	1-3
Exhibit 1-4. Undergraduate Nursing Program Graduates in NYS by Institutional Sector, 1990-91 to 2000-01	1-4
Exhibit 1-5. Associate Degree Nursing Program Graduates in NYS by Institutional Sector, 1990-91 to 2000-01	1-4
Exhibit 1-6. Associate Degrees in Nursing in NYS by Institutional Sector, 1990-91 to 2000-01	1-5
Exhibit 1-7. Bachelors Degree Nursing Program Graduates in NYS by Institutional Sector, 1990-91 to 2000-01	1-5
Exhibit 1-8. Bachelors Degrees in Nursing in NYS by Institutional Sector, 1990-91 to 2000-01	1-6
Exhibit 1-9. Nursing Program Awards in NYS by Gender, 1990-91 to 1996-97.....	1-7
Exhibit 1-10. Gender Mix of Nursing Program Graduates in NYS by Institutional Sector, 1996-97	1-8
Exhibit 1-11. Gender Mix of Nursing Program Graduates in NYS by award Type, 1996-97	1-8

Exhibit 1-12. Racial-Ethnic Mix of Nursing Program Awards in NYS, 1994-95 to 1996-97 ...	1-9
Exhibit 1-13. Racial-Ethnic Mix of Nursing Program Graduates in NYS, by Institutional Sector, 1996-97.....	1-10
Exhibit 1-14. Racial-Ethnic Mix of Nursing Program Awards in NYS, by Award Type, 1996-97	1-11
Exhibit 1-15. Racial-Ethnic Mix of Undergraduate Nursing Program Awards in NYS by Regents Region, 1996-97.....	1-11
Exhibit 1-16. Future Nursing Program Applications in NYS, Expectations of Nursing School Deans.....	1-13
Exhibit 1-17. Future Nursing Program Acceptances in NYS, Expectations of Nursing School Deans.....	1-13
Exhibit 1-18. Job Market for Nurses in NYS, By Health Care Setting, Based on Opinions of Nursing School Deans.....	1-14
Exhibit 1-19. Comparison of Job Market for RNs in 1999 and 1998 Based on Assessments of Nursing School Deans	1-14
Exhibit 1-20. NCLEX Pass Rates in NYS by Institutional Sector, Q1, 1997 to Q3, 1998.....	1-15
Exhibit 2-1. Characteristics of Survey Respondents.....	2-3
Exhibit 2-2. Recently Licensed RNs in NYS: % Female	2-4
Exhibit 2-3. Recently Licensed RNs: Under-Represented Minorities.....	2-5
Exhibit 2-4. Recently Licensed RNs: Citizenship	2-6
Exhibit 2-5. Recently Licensed RNs: Presence of Minor Children in the Home	2-7
Exhibit 2-6. Recently Licensed RNs: Average Age	2-8
Exhibit 2-7. Percent of Recently Licensed RNs Over 35 Years Old	2-8
Exhibit 2-8. Recently Licensed RNs: % Who Received Non-Nursing Degree Before RN Licensure	2-9
Exhibit 2-9. Recently Licensed RNs: Currently Enrolled in Another Formal Nursing Program.....	2-10
Exhibit 2-10. Adequacy of Preparation of Recently Licensed RNs in NYS, by RN Program.	2-11
Exhibit 2-11. Adequacy of Preparation by RN Program: Clinical Skills	2-12
Exhibit 2-12. Adequacy of Preparation by RN Program: Caring for Chronically Ill Patients .	2-12
Exhibit 2-13. Adequacy of Preparation by RN Program: Caring for Acutely Ill Patients.....	2-13
Exhibit 2-14. Adequacy of Preparation by RN Program: Administrative/Supervisory Skills .	2-13
Exhibit 2-15. Adequacy of Preparation by RN Program: Management Skills.....	2-14
Exhibit 2-16. Adequacy of Preparation of Recently Licensed RNs in NYS, Prepared by SUNY	2-15

Exhibit 2-17. Recently Licensed RNs in NYS: Effect of RN Program Characteristics on Educational Experience	2-16
Exhibit 2-18. Recently Licensed RNs: % Employed in 2 or More Positions	2-17
Exhibit 2-19. Practice Setting by Educational Level	2-17
Exhibit 2-20. Difficulty Finding a Satisfactory RN Position: Recently Licensed RNs in NYS.....	2-18
Exhibit 2-21. Percentage of Respondents Having to Change Job Plans Because of Limited Opportunities	2-19
Exhibit 2-22. Average Annual Nursing Salary of Recently Licensed RNs in NYS by Educational Level and Sector	2-19
Exhibit 2-23. Satisfaction with Salary Recently Licensed RNs in NYS by Educational Level and Sector	2-20
Exhibit 2-24. Satisfaction with Principal Position: Recently Licensed RNs in NYS by Educational Level and Sector	2-21
Exhibit 2-25. Overall Assessment of the Job Market, Recently Licensed RNs in NYS	2-21
Exhibit 2-26. Recently Licensed RNs: Assessment of Job Market by Setting.....	2-22
Exhibit 3-1. BSN Completers: Racial-Ethnic Category by SUNY Institutional Type	3-3
Exhibit 3-2. Age and Children of BSN Completers and New BSNs.....	3-4
Exhibit 3-3. Reason for Obtaining BSN and Experience After Earning BSN.....	3-4
Exhibit 3-4. Adequacy of Preparation: BSN Completers and New BSNs	3-5
Exhibit 3-5. BSN Completers by Practice Setting	3-6
Exhibit 4-1. Possible SUNY Nursing Program Regional Planning Clusters.....	4-2
Exhibit 4-2. Nursing Program Awards in NYS by Regents Region, 1990-91 to 2000-01	4-3
Exhibit 4-3. Undergraduate Nursing Program Awards in NYS by Award Type and Regents Region, 1996-97.....	4-4
Exhibit 4-4. Undergraduate Nursing Program Awards in NYS by Institutional Sector and Regents Region, 1996-97	4-5
Exhibit 4-5. Percentages and Numbers of Newly Licensed Nurses Who Had Difficulty Finding a Suitable Position, By Region in NYS, 1998 Graduates.....	4-7
Exhibit 4-6. Percentages and Numbers of Newly Licensed Nurses Who Had to Change Employment Plans, By Region in NYS, 1998 Graduates.....	4-8
Exhibit 4-7. Average Number of Months to Find a Suitable Position in Nursing, By Region, Newly Licensed Nurses in NYS, 1998 Graduates.....	4-9
Exhibit 4-8. Average Salaries of Newly Licensed Nurses in NYS, By Region, 1998 Grads....	4-11
Exhibit 4-9. Anticipated Changes in Nursing Program Applications and Acceptances Based on Assessments of Nursing School Deans in NYS, 1999	4-12

MEETING FUTURE NURSING NEEDS OF NEW YORKERS

EXECUTIVE SUMMARY

At the request of the system administration of the State University of New York (SUNY), the Center for Health Workforce Studies at the School of Public Health at the University of Albany, undertook a study of the education, supply, demand and distribution of nurses in New York State. The goal of the study was to better understand the role of the SUNY system in the education of registered nurses in the state and to assist the Office of the Provost in identifying emerging academic policy issues associated with current health care market dynamics. For example, should the SUNY system be educating more or less registered nurses in total, by educational level and by substate region. In addition, the Provost for the University and the SUNY system administration were interested in knowing whether the registered nurses educated by SUNY were being adequately prepared for the rapidly changing medical and health care system.

To achieve the goal, the Center undertook a study of the overall supply, demand and distribution of nurses in the state and assessed the contribution of SUNY nursing programs in educating nurses in the aggregate, and by education level and region. The study included the following components:

- A review of the number of nursing graduates by program in New York State over the past decade in diploma programs, associate degree programs, and bachelors degree programs;
- A survey of the deans of all of the nursing programs in New York to assess recent trends in applications, graduations and demand for new nurses;
- A survey of the more than 8,000 registered nurses licensed in New York between October 1997 and September 1998 covering their demographic characteristics, education, experience in the job market; and adequacy of their education;
- A survey of associate degree nurses completing a SUNY baccalaureate program (BSN Completion Program) covering their demographic characteristics, reasons for obtaining a BSN, work plans and experience in the job market;

- An analysis of a survey of hospitals in New York City on nurse vacancy rates, recruitment difficulties and hiring plans;
- An analysis of data from the State Education Department on the pass rates by graduates of nursing programs on the nurse licensing examination (NCLEX) for all 4 quarters of 1997 and the first three quarters of 1998; and
- The convening of an advisory committee composed of representatives of more than a dozen SUNY nursing programs (see Appendix A for a listing of the members).

FINDINGS

The following are the major findings from the study as well as the recommendations and academic policy questions that flow from the findings. While the primary purpose of the report is to advise SUNY policy makers, the findings and the recommendations are divided into two parts: the first is for the nursing education/health system in the state overall; and the second, specifically for SUNY. The SUNY findings and recommendations are easier to understand in the context of the overall/general findings and recommendations. The academic policy questions are targeted toward SUNY alone.

General

- 1. The number of nurses graduating from nursing programs in New York State has been decreasing steadily for the past three years and will continue to decrease for at least another 2 years. Nursing graduations in the state are expected to decrease 25% between the academic years of 1995-96 and 2000-01; this is a decrease of more than 1,900 new RNs per year.**

Although some nursing deans reported an upswing in applications and acceptances for the 1999-00 academic year, many others—especially BSN program deans—know that graduations will continue to decline for the next two years based on current enrollment and applications. The net effect is that nursing program graduates in New York State will continue to decline for at least the next several years. [Exhibit ES-1]

2. **Based on experiences of recently licensed RNs¹ there was a modest surplus in the state in 1998. The surplus appears to have been greatest in Western New York, where new graduates had a very difficult time finding satisfactory positions.**

On the survey of recently licensed RNs, 48% of the respondents statewide reported having a difficult time finding a satisfactory position [Exhibit 2-20, p. 2-20], 26% had to change their plans due to limited job opportunities [Exhibit 2-21, p. 2-21], and 66% believed there were fewer jobs than nurses [Exhibit 2-25, p. 2-25]. In Western New York, the figures were 73%, 34%, and 90%, respectively.

3. **While the total supply of RNs may have been adequate in 1998 and 1999, there were unfilled vacancies for nurses with specific skills and/or experience. For example, hospitals in New York City reported significant difficulty in recruiting peri-operative, critical care and emergency room nurses. (GNYHA Survey)**

The fact that many health facilities around the state appeared to be having a difficult time recruiting nurses with specific experience at the same time that newly licensed nurses were having a difficult time finding jobs, suggests a mismatch between the nursing experience levels desired by employers and the actual experience levels of recently licensed nurses.

4. **While future demand for registered nurses is difficult to predict with certainty, over the next few years demand is likely to increase moderately.**

The majority of RNs continue to be employed in hospitals. In fact, 61% of the recently licensed RNs were employed in hospitals (including inpatient and ambulatory positions in acute care and psychiatric hospitals). While there was a decrease in hospital use and nurse staffing in the mid-1990s in response to cost pressures and competition, the reductions in nurse staffing were only modest and nurse staffing actually increased in the late 1990s. For example, while total inpatient hospital days in New York City were

¹The term “Recently Licensed RN” refers to RNs who were licensed for the first time in New York State between October 1998 and September 1999. While the Center surveyed all of the nurses licensed during this period, the data presented in this report, unless otherwise noted, are based on those newly licensed nurses that graduated from nursing programs in New York State and who had less than one year of registered nursing experience when they completed the survey. The methodology and results of this survey are presented in Chapter 2.

down 15% between 1992 and 1997, (UHF,1999) hospital nursing employment was down only slightly over the period. While the number of registered nurses working in hospitals in New York City decreased 9.5% from 1993 to 1997, it increased slightly in 1998, signaling at least a short term flattening of the downward trend.

Although pressures to reduce health care costs are likely to continue, future reduction in hospital beds and RNs may be more dependent on the general economy and health care reimbursement policies in the state than changes in the health care delivery system. A strong economy will increase the likelihood that RN employment levels in hospitals will be stable over the next few years rather than continuing to decline. Furthermore, the demand for RNs in nursing homes, home care and other settings is likely to continue to be strong for the next several years.

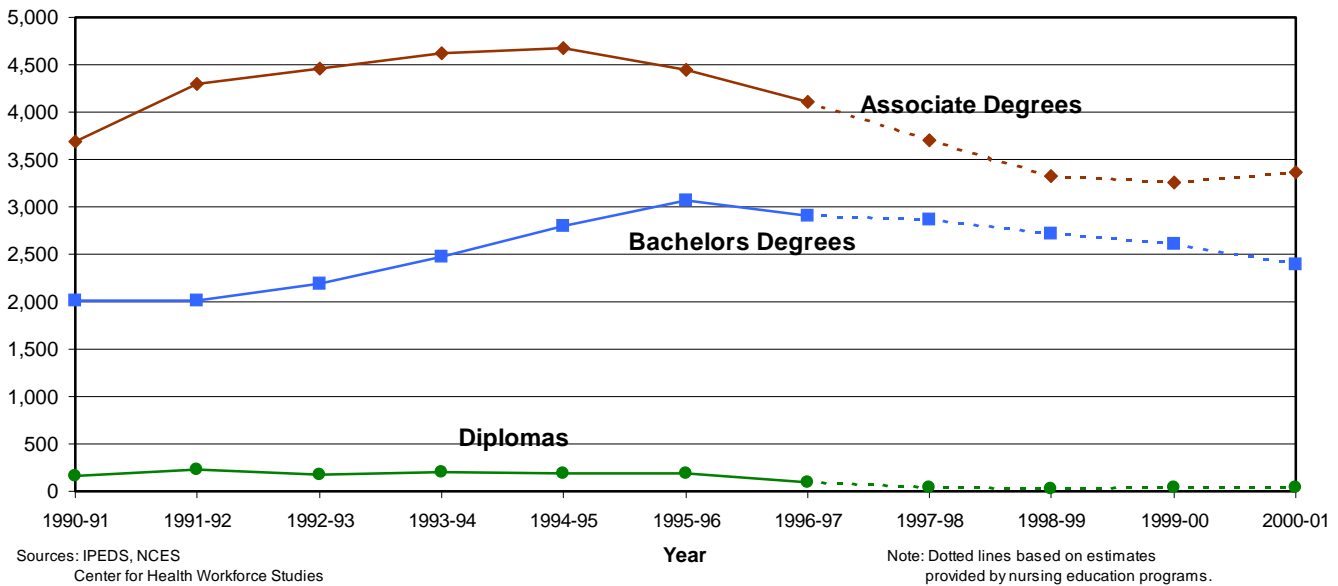
- 5. Since the number of new RNs is decreasing while the demand appears to be constant or even increasing, there is likely to be a growing shortage of new RNs over the next few years.**

The decline in the number of graduates over the past several years combined with continued relatively strong demand for nurses is likely to lead to general shortages of new RNs. In fact, the survey of nursing deans documented that job prospects and opportunity for graduates in 1999 were far better than those for the 1998 graduates, [Exhibit 1-19, p. 21] indicating that any surplus of RNs that may have existed is probably disappearing.

- 6. A majority of the graduates of registered nursing programs in New York State in 1998-99 (55%) had an associate degree.**

While the number of RNs graduating with BSNs in New York increased sharply from the 1990/91 academic year until 1995/96 (52%), the number has been declining ever since and will decline for at least several more years. The number of associate degree graduates has declined steadily since 1994/95, but is expected to rise slightly in 1999-00 and 2000-01 based on the survey of nursing school deans. [Exhibits ES-1 and 1-2, p. 1-3]

**Exhibit ES-1. Undergraduate Nursing Education Program Awards in New York State
by Award Type, 1990-91 to 2000-01**

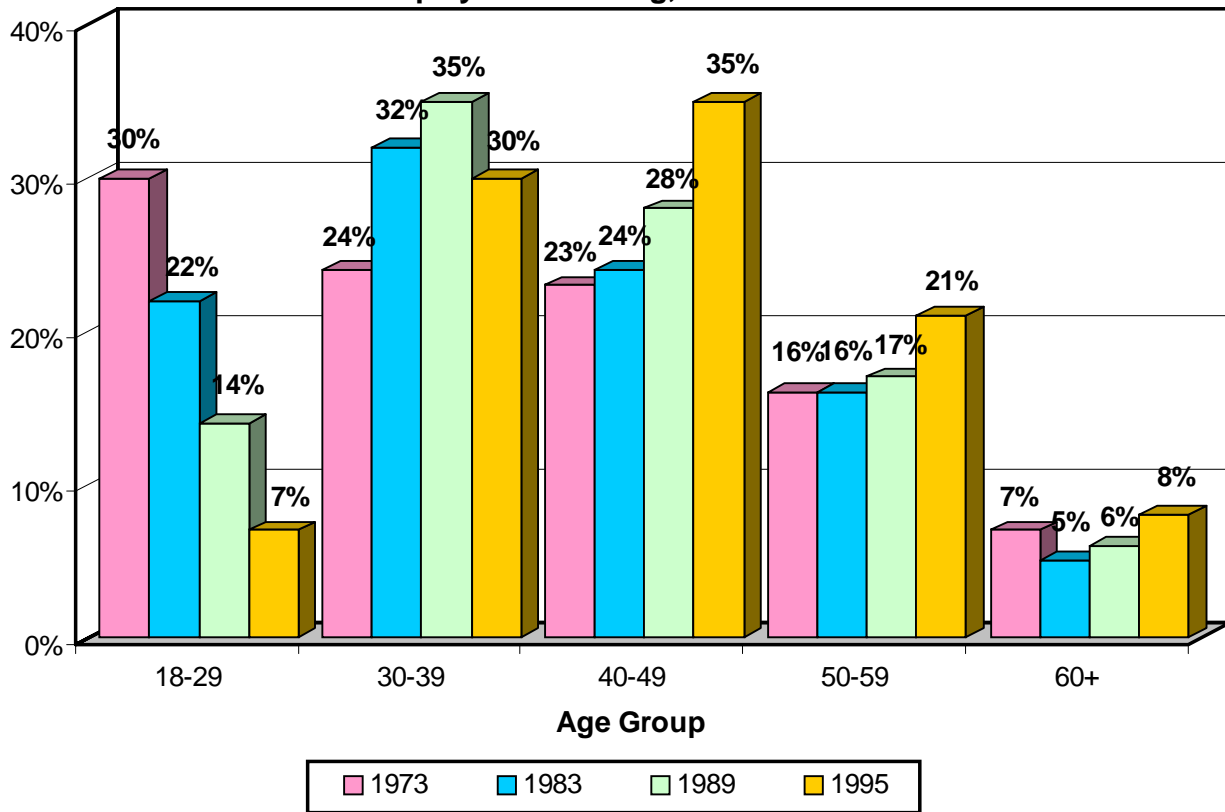


- The age of entry into nursing has increased over the past decade. Of the recently licensed RNs from New York State programs, the average age was 32 years. In the long run, this may reduce the supply of active RNs. The average age of recently licensed RNs from associate degree programs (34 years) was far older than those from BSN programs (28.6 years).**

The older age of entry is clearly contributing to an older age profile for the overall nursing supply. As can be seen in Exhibit ES-2, there has been a sharp decrease in the number of RNs in the younger age groups. The older age of entry may reduce the total number of years of worked on average by nurses. Both the short term and long term impact of this trend is difficult to assess. The recently licensed associate degree nurses were far more likely than the BSN graduates to have children (58% vs. 23%). It is not known, however, whether this will make them more or less likely to take off time during the early years of their nursing career to raise their children than the BSN nurses and nurses in the past that entered at an earlier age without children. (Nurses with children under six are generally more likely to work fewer hours than other nurses. If newer nurses are entering already having had children with some being over the age of six, it is possible that the newer nurses may work more hours during the early years of their nursing career.) The longer term impact is also unclear because nothing is known

about the likely career paths that the new, older entry nurses will take. It is not known for example, whether they will be more likely to retire earlier or later than nurses that began their nursing career at an earlier age.

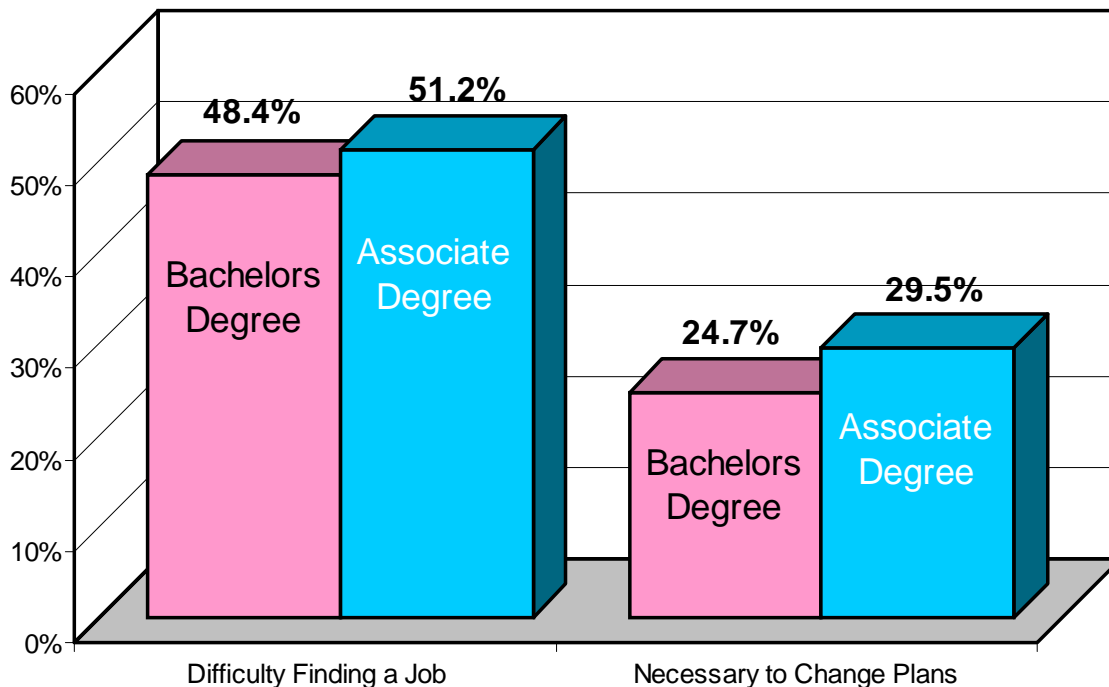
Exhibit ES-2. Age Distributions of RNs in New York State Employed in Nursing, 1973 to 1995



8. Based on the experience of the recently licensed nurses, the demand and job opportunities for BSNs are similar to those for associate degree RNs.

The survey of recently licensed RNs included a series of questions related to their experiences in finding a job. A higher percentage of BSNs go into hospital positions which are better paying. While this may indicate some preference for BSNs by hospitals and other employers, a series of other indicators of demand suggests that BSNs and associate degree graduates have had similar experiences in the job market, such as difficulty finding a job, need to change plans and view of the job market. [Exhibits ES-3, 2-20, and 2-21, pp. 2-20 and 2-21]

Exhibit ES-3. Job Market Experiences of Newly Licensed RNs in New York State, Bachelors and Associate Degree Graduates, 1999



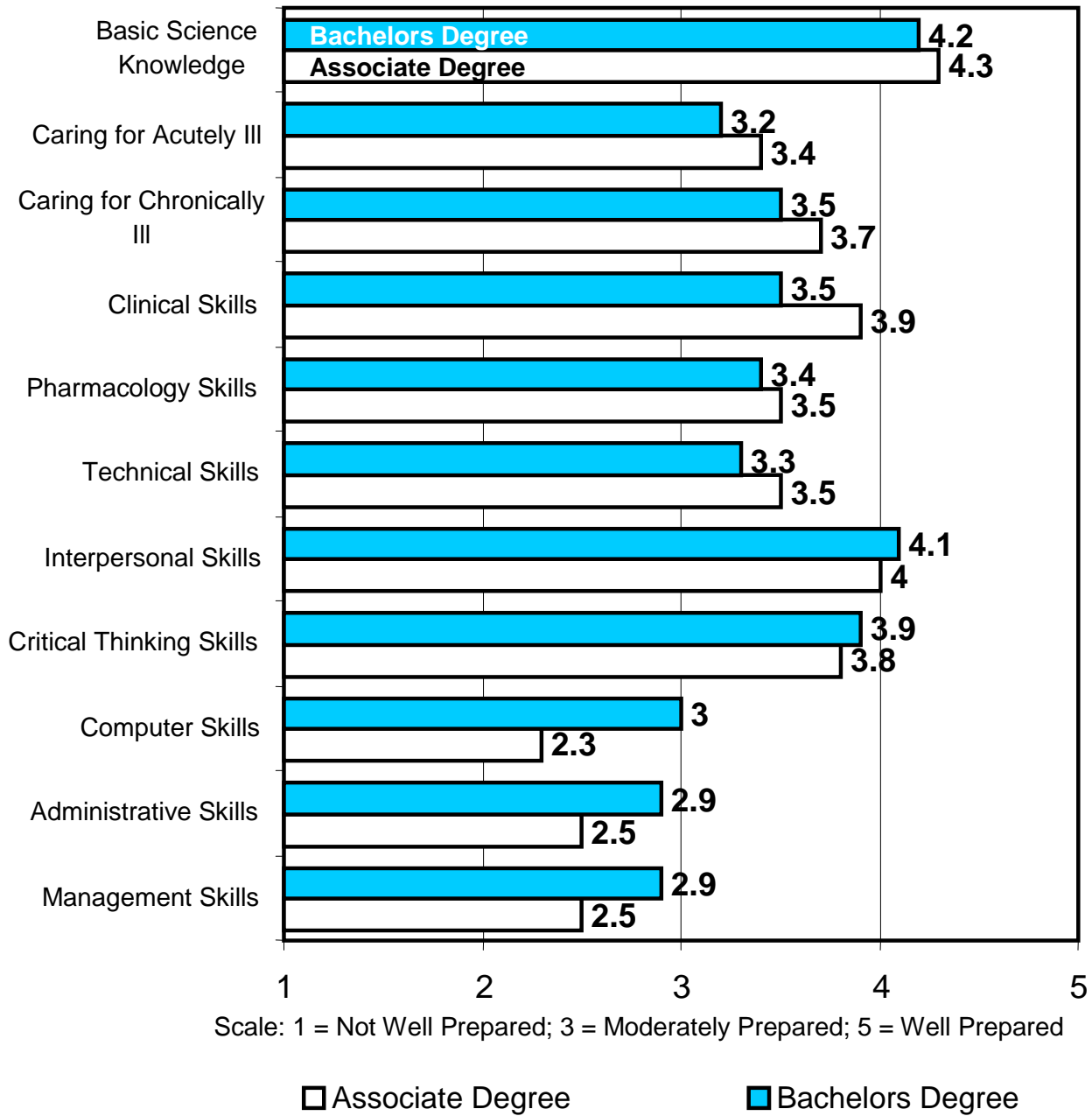
Center for Health Workforce Studies, 1/00

9. In general, recently licensed registered nurses believe they are well prepared and are satisfied with their education. Associate degree RNs were slightly more likely than BSNs to assess their education as adequate in a number of clinical areas. BSNs assessed their education related to administration, supervision and computers slightly better than associate degree graduates.

The survey of recently licensed RNs included a series of questions about their own assessment of how well prepared they thought they were for their nursing positions. The area rated lowest overall was the adequacy of preparation related to computer skills [Exhibits ES-4, 2-10, and 2-16, pp. 2-12 and 2-16].

10. There is a mismatch between the experience of the recently licensed RN and the experience desired by employers. Based on the survey of recently licensed RNs, this is a significant problem. This is also consistent with the findings of a survey of hospitals in New York City conducted by the greater New York Hospital Association (GNYHA).

Exhibit ES-4. Assessments of Adequacy Training by Bachelors and Associate Degree Graduates



The survey of recently licensed RNs included an open-ended question inviting the respondent to provide any additional comments regarding their education and experience in the job market. An unusually high percent (50%) of respondents took the time to provide written comments. An analysis revealed that the most common comment, cited by 33% of

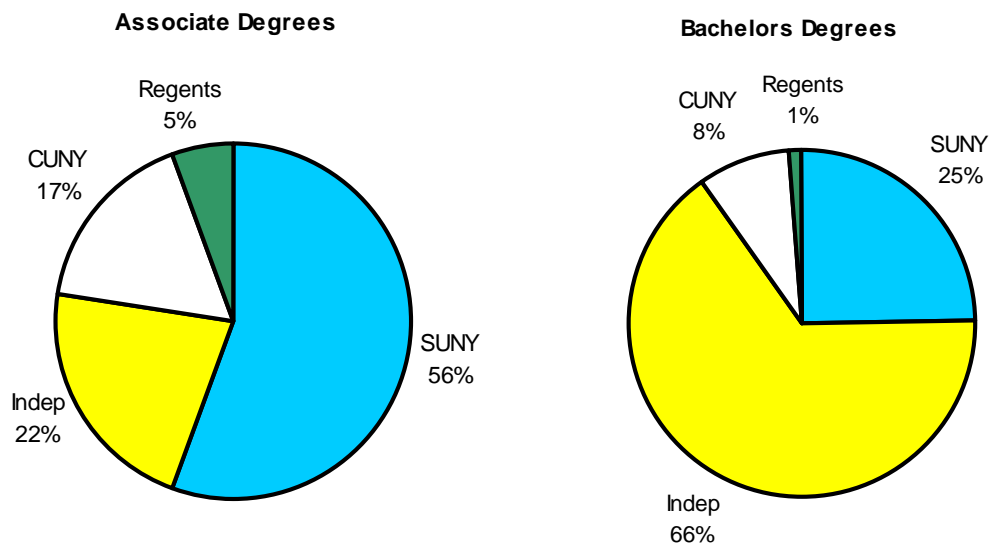
the respondents who wrote comments, related to the belief that they did not have enough experience to obtain the jobs that were available. The GNYHA survey found that the major shortages that existed were for RNs with specific skills or experiences.

- 11. The percentages of recently licensed RNs that were Black/African Americans (12.7%) and Hispanic/Latino (4.9%) were low compared to their representation in the general state population, 17.7% and 14.4% respectively.**

Overall, the racial and ethnic mix was similar for BSN and associate degree graduates [Exhibit 2-3, p. 2-5].

- 12. There is great diversity in the educational system for nurses in New York State, both in terms of degree level and institutional sponsorship. [Exhibit ES-5]**

**Exhibit ES-5. Nursing Education Awards in New York State
By Institutional Sector, 1998-99**



Center for Health Workforce Studies, 1/00

- 13. Care provided by RNs is clearly becoming more complex in all settings. Many new RNs are concerned that they are being asked to assume responsibility beyond their education and training.**

This concern may reflect, in part, the trend toward shorter lengths of stay in all facilities, which generally increases average patient acuity and requires more intense care. The survey of recently licensed nurses revealed that many new nurses were concerned with the scope of the services they were being asked to provide. Of the open-ended comments, 24% of the respondents indicated they felt overworked, 11.6% expressed concern about safety on the job, 5% felt they had been given too much responsibility and 6% believed they needed more training. (Responses were coded in more than one area.)

14. Based on the survey of recently licensed RNs, it appears that nurses would be willing to work additional hours if higher wage rates were available and/or if they could work different hours or shifts.

It may be possible for the current supply of RNs to meet marginal increases in demand (and/or address decreases in the total number of nurses) in the future. More than one-third of the recently licensed RNs educated in New York indicated that they would be willing to work additional hours if higher hourly rates were available. An additional 29% said they would be willing to work additional hours if flexible hours or different shifts were available. Only 15% said they would not be willing to work additional hours under any conditions.

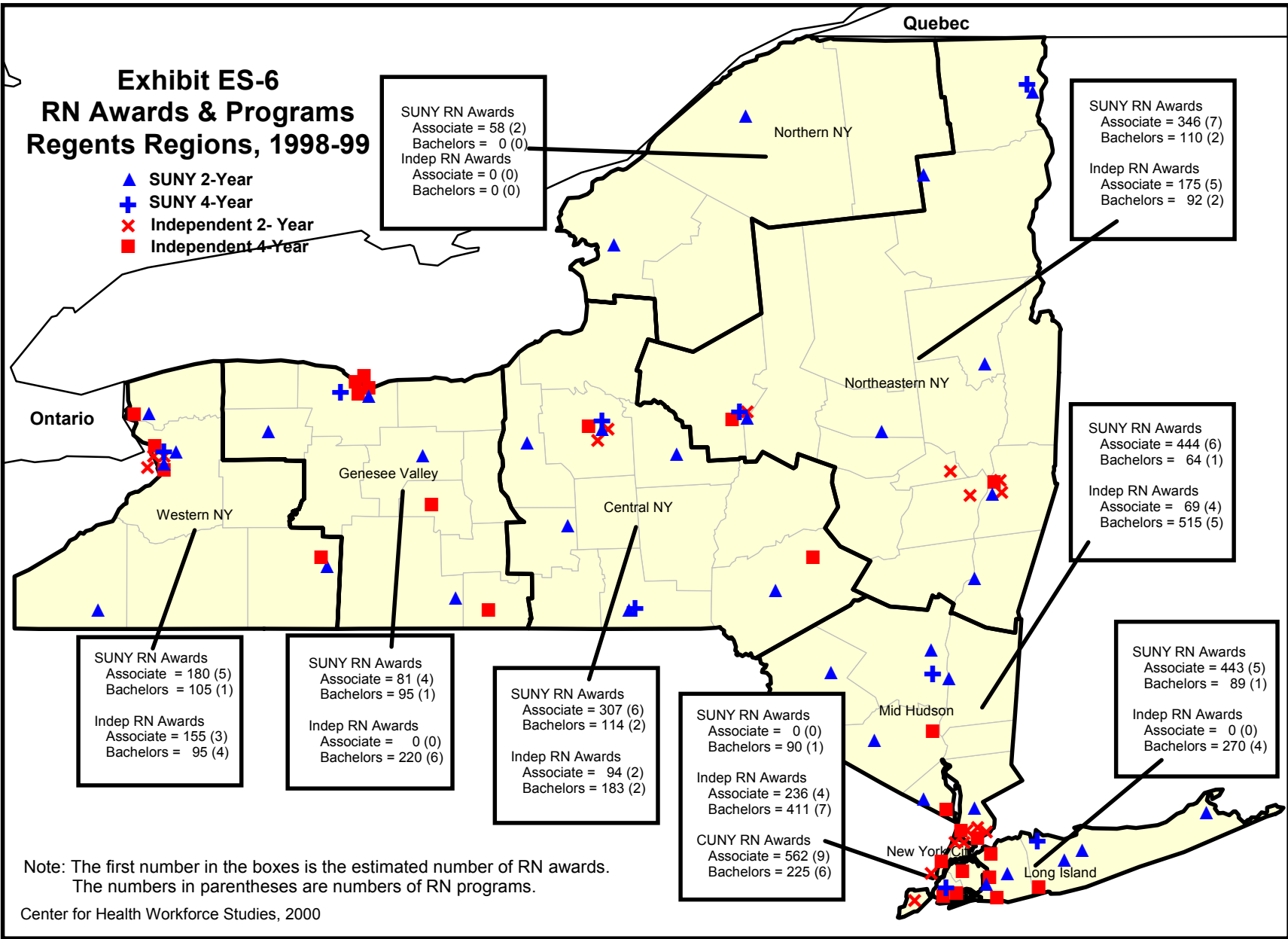
B. The SUNY System

- 1. In 1998/99, 2,516 individuals graduated from SUNY registered nursing programs representing 41.6% of all registered nursing program graduates in the state. The SUNY system is dominant in the education of associate degree RNs with 55.7% of all of the 1998/99 graduates; on the other hand only 24.8% of the new BSNs graduates were from SUNY.**

As can be seen in the map in Exhibit ES-6, the SUNY system is generally well distributed across the state. In many counties, a SUNY campus is the only one offering a nursing education program.

Exhibit ES-6 RN Awards & Programs Regents Regions, 1998-99

- ▲ SUNY 2-Year
- ⊕ SUNY 4-Year
- ✕ Independent 2-Year
- Independent 4-Year



Note: The first number in the boxes is the estimated number of RN awards.
The numbers in parentheses are numbers of RN programs.

- SUNY campuses offering registered nursing programs are very diverse. They include: 4 academic health sciences centers, 5 other university centers and colleges offering the BSN; and 5 technical colleges and 27 community colleges offering associate degrees.**

Many of the health sciences centers and other universities offer BSN completion programs for registered nurses with an associate degree as well as graduate nursing programs.

- There are major demographic differences between SUNY associate degree graduates and the SUNY BSN graduates. These differences are not unique to the SUNY system-they also exist within the independent colleges and within CUNY.**

Based on the survey of recently licensed nurses in New York, the SUNY associate degree RNs are older than the SUNY BSN graduates and are far more likely to have minor children. While relatively few SUNY graduates are under-represented minorities, especially in the Associate degree program, this may reflect the communities where the schools are located [Exhibit ES-7].

Exhibit ES-7. Age, Presence of Children at Home and Race by SUNY Sector

	Ag & Tech	Community Colleges	Health Science Centers	Non-HSC 4 Year Programs
Age	33.3	34.9	27.9	27.1
Children at home	45.3%	59.3%	19.4%	9.8%
Race				
% Black/African American	2.3%	3.9%	8.3%	1.6%
% Hispanic/Latino	--	--	5.6%	3.3%

Source: CHWS, 1999 Survey of Recent RN Graduates

- The SUNY community colleges and technical colleges appear to be preparing nurses for their local communities, while the BSN programs tend to serve statewide needs.**

The survey of recently licensed RNs included a question on whether the respondent was most familiar with the job market within 25 miles of where they went to nursing school or within 25 miles of their practice if it was different [Exhibit ES-8]. A majority of the graduates of the associate programs said they were most familiar with

the job market where they went to school, while only about a quarter of BSN program graduates identified the local area. This tends to confirm that the associate degree nurses are more likely to practice in the communities where they go to school than BSN graduates.

**Exhibit ES-8. Geographic Area Most Familiar with Job Market
by SUNY Sector**

	Ag & Tech	Community Colleges	Health Science Centers	Non-HSC 4 Year Programs
Within 25 miles of program	40.7%	59.7%	27.8%	24.6%
Within 25 miles of practice	29.1%	22.6%	44.4%	60.7%
Other	19.8%	7.0%	8.3%	4.9%
Not familiar	10.5%	10.7%	19.4%	9.8%

Source: CHWS, 1999 Survey of Recent RN Graduates

5. The SUNY BSN completion programs play a major role in providing career advancement to associate degree registered nurses.

The survey of the graduates of the SUNY BSN completion programs (for registered nurses with an associates degree) revealed that these students were substantially older (39 years old) than the recently licensed nurses and on average these nurses had more than 8 years of experience as a registered nurse. The most often cited reason for obtaining their BSN was career advancement (74% of the respondents). Fifty percent (50%) indicated that their tuition costs were reimbursed by their employer.

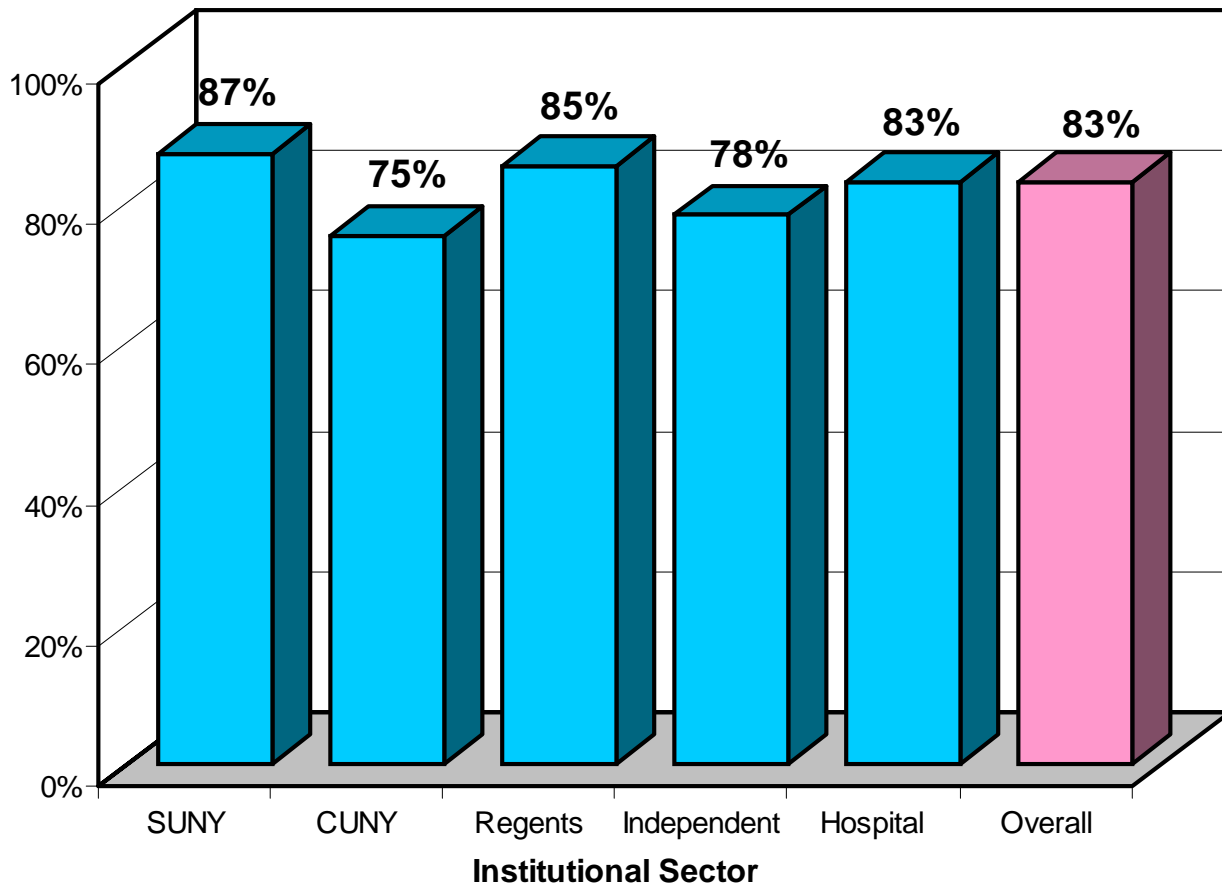
6. Based on recently licensed RN survey data, the marketplace does not exhibit a clear preference for SUNY or non-SUNY graduates.

A review of the responses on the survey of recently licensed RNs did not reveal any preference for SUNY or non-SUNY graduates on questions related to the respondents' experiences finding a job or in their view of the job market or in satisfaction. While there were differences on a variety of questions by region or educational level, these differences were not related to the educational sponsor [Exhibits 2-20, 2-21, 2-23, 2-24, 2-25, pp. 2-20, 2-21, 2-23, 2-24, 2-25].

7. SUNY program graduates appear to be as well or better prepared for practice than non-SUNY program graduates.

Based on the response of recently licensed nurses to questions about the adequacy of their nursing education, SUNY graduates generally rate their education as equal to or better than graduates of non-SUNY programs. SUNY graduates also scored somewhat higher on the nurse licensing exam (NCLEX) than non-SUNY graduates. SUNY graduates generally rated their computer skills, administrative, supervisory and management skills lower than clinical skill areas. [Exhibit ES-9]

**Exhibit ES-9. NCLEX Pass Rates in New York State
By Institutional Sector, Q1 1997 through Q3 1998**



Center for Health Workforce Studies, 1/00

RECOMMENDATIONS

The following recommendations are based on the findings from the study. The recommendations are presented first for the nursing education community in general and then for the SUNY system. The recommendations for SUNY can best be understood in the context of the needs of and directions for nursing education in general. Following these recommendations are a set of academic policy questions targeted toward SUNY.

A. Statewide Recommendations

1. *It is recommended that RN graduations in NYS be increased modestly, (between 10 and 15%) over the next several years to better meet anticipated demand for new RNs.*

The recent decline in nursing graduations in the state when combined with stable or growing demand for RNs and existing spot shortages of nurses with specific skill sets is of concern despite the relatively soft market for new nurses in the state. In 1998 Although there has been a slight upturn in applications and acceptances in associate degree programs, this increase is not sufficient to meet anticipated needs. The greatest need appears to be in upstate New York other than western New York. Western New York appears to have more than adequate production to meet regional needs for new RNs for the next several years.

2. *The current system of educating RNs at both the associate and baccalaureate levels should be continued. The data indicate that the marketplace offers many opportunities for both the associate and the baccalaureate RN. In addition, many associate degree programs are in counties with no other nursing programs.*

Decisions on whether to meet future demand by increasing the number of associate or baccalaureate level nurses should be left up to the nursing education community and the marketplace. Based on the responses of recently licensed nurses to questions on the adequacy of their preparation and their experience in the job market, there is nothing in the data to suggest that associate degree RNs are any less capable of providing clinical patient care services than BSN graduates. On average, the new associate degree RN is older and is more likely to have children than the new BSN

RN, this may compensate for the additional education of the BSN graduates. In addition, a relatively high percentage of new associate degree nurses (38%) had a non-nursing degree prior to entering nursing school.

- 3. Based on the survey of recent RN licenses and graduates of the SUNY BSN completion programs, it appears that BSNs are better prepared for administrative, supervisory and management responsibilities than associate degree graduates.***

Based on the assessments of their own education, associate degree nurses rank their preparation on administration, supervision and management well below the assessments of new BSNs. This is not surprising, since associate degree programs appear to focus their limited education time on clinical education and skills. The survey of nurses who graduated from a SUNY BSN completion program in 1998 also found that 74% of the respondents cited career advancement as a major reason for enrolling in the BSN program, while only 38% cited improved skills as a reason for enrolling. Thus, it appears that the BSN path is the preferred path for administration, leadership, and advanced practice in nursing and health care.

- 4. Given the rapid changes in medical intervention and the health care delivery system it is critical that there be opportunities for continuing education for all RNs. This includes BSN completion programs, special certificates of expertise and individual courses. Employer support for continuing education is important and appropriate.***

Providing high quality of care requires a commitment to life long learning. The health and education communities need to assure the easy availability of continuing nursing education and training.

The fact that 50% of the graduates of the BSN completion programs had tuition support from their employer, demonstrates the importance of financial support for continuing education.

- 5. Clinical training of new registered nurses should be expanded, perhaps to include a 6 to 12 months post degree period of clinical internship. In the short run, the health and education community should undertake demonstration projects testing alternative approaches to expanding clinical preparation and training.***

As noted above, many new nurses expressed concerns and/or frustrations with their current position and the mismatch between the experience desired by employers and the experience that they actually had. Employers for years have also expressed frustration at the time and cost of fully preparing new nurses for practice in today's health care environment. Such an internship would benefit new nurses, facilities, and patients. Patient care needs may be too intense to rely on on-the-job training without more extensive supervision.

The dilemmas are how to pay for the additional time in training and determining who should be responsible for the training. Demonstration projects may be able to help increase the understanding of the feasibility of alternative approaches to new RN internship programs.

6. ***The curriculum in registered nursing programs should be modified to include increased instruction on the use of computers.***

This was an area where both new associate and BSN RNs indicated they were less adequately prepared than other areas. In many ways, this is not surprising. The introduction of new computer technology in health care is relatively recent and evolving rapidly. It may be difficult for educational programs to keep up with the changes and, in some cases, to afford some of the new technology. Schools may need to work with their clinical partners to expand training in this area.

7. ***In light of the many changes impacting the demand for and supply of registered nurses, it is critical that greater resources be devoted to studying nurse workforce issues, including trends and developments impacting on nursing. An adequate supply of appropriately educated nurses is essential for effective health care.***

On the supply side, it will be important to better understand the career paths of the new nurses entering the profession at a later age than earlier generations. It is also particularly important to watch retirement patterns closely as a growing percent of the current nurse workforce is above 50. On the demand side, a better understanding of the impact of the changing delivery system and new medical interventions on the use of nurses would help in assessing future demand for RNs.

B. SUNY Recommendations

- 1. Selected nursing programs in the SUNY system should be encouraged to modestly increase their enrollment in order to address or prevent a shortage of RNs over the next several years. Enrollment increases should be targeted based on the following: the experience of the program's graduates in finding jobs; the quality of the applicant pool for the program; and the availability of alternative nursing education programs in the area.*

SUNY shares the responsibility of educating nurses to care for the citizens of New York. This is particularly clear in those communities where a SUNY system RN program is the only nursing program. SUNY also provides an important avenue of access to quality education at a reasonable cost for all New Yorkers.

- 2. SUNY should develop regional clusters or networks of nursing programs to foster educational and administrative collaboration and efficiencies. Each cluster should offer a full range of nursing education from associate degree to post-BSN advanced education. The regional clusters could also promote the use of distance learning and continuing nursing education programs in their regions. The regional networks would also facilitate regional student recruitment initiatives and collaborations with the health care sector.*

Regional clusters could provide support for program development, shared resources, and student recruitment. Regional clusters would be designed to build on the many strengths of the individual nursing programs within the SUNY system. They could serve as the framework for promoting nursing education career paths from the associate to BSN to graduate degrees. As continuing education becomes more important, the regional clusters will be well positioned to assess regional needs and to share and focus resources to develop programs to meet those needs. Regional clusters could also conduct regional RN marketing and student recruitment initiatives.

A BSN offers a registered nurse additional long term career opportunities. The survey of newly licensed RNs indicates that many new associate degree RNs already had a baccalaureate degree prior to entering their nursing education program. One strategy that should be explored by the regional clusters is the offering of BSNs to students

completing their nursing education at a community or technical college in the cluster if those students have sufficient education, such as a prior non-nursing baccalaureate degree, to warrant the awarding of the BSN.

- 3. SUNY should expand linkages between the SUNY BSN programs and SUNY associate degree programs and increase collaboration with hospitals and other health care providers.***

Strengthening the linkages between the SUNY BSN completion programs and the associate degree programs would help build a continuum of nursing education within SUNY. This could best be done through the development of the regional clusters recommended above. SUNY should explore the expanded use of distance learning programs to help create linkages and additional educational opportunities in areas without a local BSN program. The Stony Brook distance learning programs for nurse midwifery and nurse practitioner are examples of the benefits of collaboration within the SUNY system and the potential for distance learning. The health sector requires skilled nurses and many health facilities have indicated their willingness to expand their involvement in nursing education. In the GNYHA Survey of Hospitals in New York City, 71% of the hospitals without an externship or internship program expressed an interest in starting such a program. SUNY should, therefore, expand its collaboration with the health care sector. The proposed regional clusters would be an appropriate vehicle for this expansion.

- 4. The SUNY Health Sciences Centers should take the lead in developing and testing an internship model after completion of registered nursing education.***

Because of the relationship of the four SUNY Health Sciences Centers with health care facilities and with the education of physicians and other health professionals, these Centers are in an excellent position to develop and test models for nursing internships. Stony Brook has already developed such a model and these efforts should be further supported by SUNY and its affiliated health care organizations.

- 5. SUNY nursing programs should strengthen their curriculum regarding information systems and computers.***

This is another area where regional clusters could help develop and implement expanded attention to appropriate applications of computers in the nursing curriculum. Collaborative efforts will be more cost effective than individual initiatives.

6. *SUNY should explore strategies to increase the number of under-represented minorities in its nursing programs.*

While most of the SUNY schools are not located in areas with high percentages of under-represented minorities, SUNY, as the public university in the state, has a responsibility to assure access to nursing education for all racial/ethnic groups. In the long run, having a nursing workforce representative of the state's population will help make the health care system more effective as workers become more responsive and understanding of the different cultures and attitudes of the consumers of health care.

7. *The system administration of SUNY should expand its efforts to provide guidance and support to the SUNY system nursing programs. This should be a collaborative effort designed to improve and strengthen nursing education in the SUNY system.*

SUNY nursing programs are educationally diverse and geographically dispersed across the state. In reality, there is very little coordination or collaboration among programs, and there is very little educational guidance from SUNY central administration. Given the challenges facing the health industry and the education community, this may be an opportune time to develop a new collaborative relationship between the nursing programs and SUNY administration built around mutual interests and goals.

As part of this effort, SUNY nursing programs should collect uniform data on their applicants, acceptances, enrollments, and graduates. This data should be analyzed by SUNY central administration and the comparative data shared with the individual programs on a timely basis.

8. *SUNY System Administration should establish a nursing task force consisting of representatives of the SUNY nursing programs to explore approaches to implementing the regional clusters, to encourage additional enrollment in nursing*

programs, and to promote strengthen nursing curricula. In addition, SUNY System Administration, in consultation with the Task Force, should develop a 5-year strategic plan for nursing in the SUNY system to implement these system improvements.

The diversity and independence of the SUNY system offers both barrier and an opportunity to be in the forefront of nursing education in the future. Through increased collaboration that builds on the strengths of the system, SUNY can improve its nursing education programs. The State University of New York has long tradition of commitment to educational excellence. Registered nurses are a critical cornerstone of the health care system. By taking up the challenge to strengthen nursing education for the 21st century within the SUNY system, the System Administration and the individual schools will be serving the needs of students, the health care system and of all New Yorkers.

THE REMAINDER OF THIS REPORT

The body of this report consists of four chapters and several appendices. Chapter one summarizes nursing education trends in New York State from 1990 through 2001. It contains an analysis of the Integrated Post-Secondary Educational System (IPEDS) data, collected by the National Center for Educational Statistics (NCES) and a survey conducted by the Center for Health Workforce Studies of all nursing program deans in New York State. Chapter two summarizes the results of the *1999 Survey of Recently Licensed Registered Nurses in New York State*, conducted by the Center. Chapter three summarizes the results of the *1999 Survey of Recent Graduates of Baccalaureate Completion Programs in Nursing in New York State*, and chapter four presents regional comparisons of key data elements pertaining to the supply, demand and distribution of RNs in New York State. Appendices include the listing of the members of the advisory committee, selected information on the individual SUNY campuses and copies of the surveys used in this study.

Chapter 1

NURSING EDUCATION TRENDS IN NEW YORK STATE, 1990 TO 2001

Registered Nurses are the largest health profession in New York State. They are a critical element in the health workforce in the state, providing care in hospitals, nursing homes, and other organizations. This report provides a variety of information about the education programs that prepare RN's for their professional work. In addition to providing counts of the graduates of different types of nursing education programs in the state, the report summarizes the demographic characteristics of the individuals graduating from the programs.

Because the most recent published data on nursing program awards is for 1996-97, and since then there have been marked changes in the job market for nurses, the Center conducted a short survey of the Deans of the Schools of Nursing in New York State to obtain data on awards for 1997-98 and 1998-99, with estimates out to 2000-01. These estimates are shown with dashed lines or italicized text in the exhibits in this section to reflect the different source of data.

Nursing education in New York State is offered by institutions in four higher education sectors: the State University of New York (SUNY), the City University of New York (CUNY), the independent colleges and universities, and the Regents College Program (now an independent university without walls). In 1996-97 there were also three non-degree, diploma programs operated by hospitals, although only one continues today.

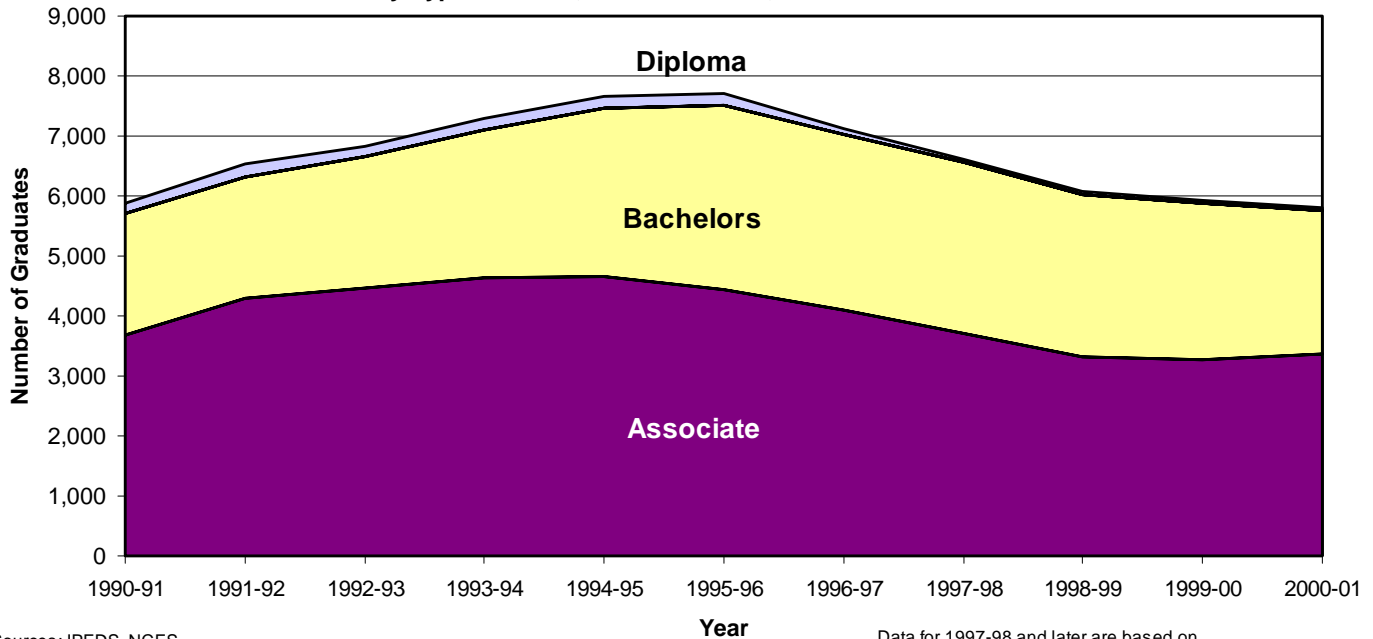
Numbers of Nursing Education Programs

There were 103 nursing education programs in New York State in 1996-97. Forty-one of these programs were offered by the State University of New York on their campuses across the state. Independent colleges offered 47 of the programs and the remaining programs were offered by the City University of New York (13) and the Regents College program (2). Although these numbers have fluctuated some in recent years, the changes have been small.

The total number of nursing program graduates in New York State in 1998-99 was 7,659, down from 8,463 in the previous year (a decrease of 10%), but up from 6,694 in 1990-91 (an overall increase of 14%). These trends are shown graphically in Exhibit 1.1 for the three types of awards. The number of associate degrees decreased by 567 between 1990-91 and 1998-99

(-15%), continuing a decline since 1994-95. The numbers of bachelors program graduates increased 34% over the same period. Diploma program awards declined by 198, or 83%. The actual number of awards is shown in Exhibit 1.2.

**Exhibit 1.1. Total Nursing Education Program Graduates
By Type of Award, New York State, 1990-91 to 2000-01**



Sources: IPEDS, NCES
Center for Health Workforce Studies

Data for 1997-98 and later are based on estimates provided by nursing education programs.

**Exhibit 1-2. Undergraduate Nursing Program Graduates in New York State
by Award Type, 1990-91 to 2000-01**

Award Type	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	95-6 to '98-9
Associate Degrees	3,686	4,302	4,456	4,626	4,669	4,447	4,102	3,700	3,322	3,250	3,365	-25.3%
Bachelors Degrees	2,019	2,012	2,191	2,469	2,791	3,062	2,911	2,873	2,686	2,585	2,362	-12.3%
Diplomas	239	309	167	199	194	186	97	41	41	41	41	-78.0%
Total	5,944	6,624	6,814	7,294	7,654	7,696	7,110	6,614	6,049	5,876	5,768	-21.4%
% Associate	62.0%	65.0%	65.4%	63.4%	61.0%	57.8%	57.7%	55.9%	54.9%	55.3%	58.3%	--

Sources: IPEDS, NCES; Center for Health Workforce Studies

Figures exclude graduate degrees.

Total production of RNs is now returning to levels of the early 1990s. The precise causes of the relative decline in associate degree production are difficult to determine, but one important factor is undoubtedly the quicker response of the associate programs to the perceived surpluses of RNs in the mid 1990s due to their two-year program duration.

Exhibit 1.2 shows that associate degree awards continue to be the largest block of nursing awards in New York State. Exhibit 1.3 shows that the number of bachelors degrees has declined since 1995-96, but the decline in associate degrees has been even greater.

Exhibit 1-3. Percentage Changes in Associate and Bachelors Degrees in Nursing In New York State, 1990-91 to 1995-96, 1995-96 to 1998-98, and 1998-99 to 2000-01

Institutional Sector	Percent Change		
	90-91 to 95-96	95-96 to 98-99	98-99 to 00-01
Associate Degrees	20.7%	-25.3%	1.3%
SUNY	5.7%	-18.9%	1.1%
Independent	36.0%	-37.0%	6.9%
CUNY	41.7%	-33.6%	-5.4%
Regents	102.2%	10.4%	1.4%
Bachelors Degrees	51.7%	-12.3%	-12.1%
SUNY	16.4%	-13.2%	-2.1%
Independent	98.0%	-7.3%	-19.0%
CUNY	-1.1%	-38.8%	10.3%
Regents	-5.5%	11.2%	2.9%

Sources: NCES, IPEDS; Center for Health Workforce Studies

NURSING PROGRAMS BY INSTITUTIONAL SECTOR

New York State produced 6,050 undergraduate nursing program awards in 1998-99. The independent colleges had the largest share of these awards (2,532), followed closely by SUNY with 2,516 awards (Exhibit 1-4). The City University had another 787 undergraduate nursing awards, and the Regents program had an additional 215. While the Regents External Degree Program awarded 2,232 RN nursing degrees in 1996-97, some 90% of these were to people from states other than New York (All of the figures for Regents program graduates presented in this report have been adjusted to include only the estimated number with New York State addresses based on the 1996-97 percentages with New York addresses. This excludes 91.4% of the associate degree awards and 84.4% of the bachelor degree awards).

**Exhibit 1-4. Undergraduate Nursing Program Graduates in New York State
by Institutional Sector, 1990-91 to 2000-01**

Award Type												% Change
	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	95-6 to '98-9
SUNY	2,816	3,102	3,094	3,194	3,178	3,047	2,910	2,772	2,516	2,463	2,522	-17.4%
Independent	2,050	2,351	2,482	2,874	3,085	3,244	2,901	2,679	2,532	2,428	2,247	-22.0%
CUNY	965	1,049	1,102	1,093	1,232	1,210	1,092	954	787	765	780	-35.0%
Regents	113	122	136	133	159	195	207	209	215	221	218	10.5%
TOTAL	5,944	6,624	6,814	7,294	7,654	7,696	7,110	6,614	6,050	5,877	5,768	-21.4%

Sources: IPEDS, NCES; Center for Health Workforce Studies

Figures exclude graduate degrees.

Exhibit 1-4 shows that between 1995-96 and 1998-99 the total number of RN degrees awarded by all four higher education sectors declined from 7,696 to 6,050 (a decrease of 21.4%). This reversed the trend from 1990-91 to 1994-95 which showed an increase of 29%.

Exhibits 1-5 and 1-6 show that SUNY continues to be the largest producer of associate degree RNs, with over half the awards in every year in this study. The numbers of associate degree RNs produced by SUNY, the independent colleges, and CUNY are expected to continue to decline until a modest increase in 2000-01. The decline, which is occurring despite growing concerns about a nursing shortage in the state, is attributable in part to the normal lags in the production process due to the length of the education pipeline.

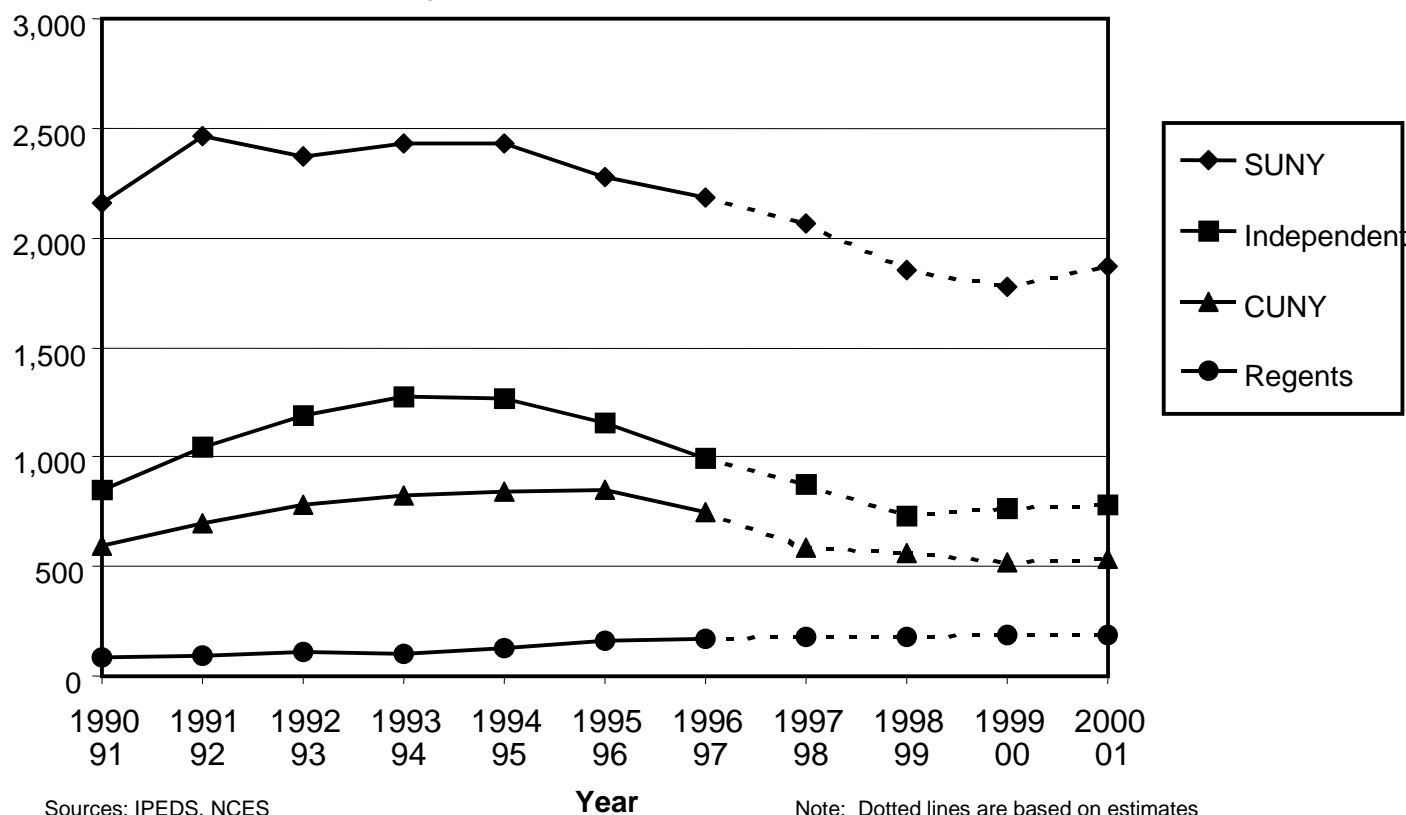
**Exhibit 1-5. Associate Degree Nursing Program Graduates in New York State
by Institutional Sector, 1990-91 to 2000-01**

Award Type												% Change
	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	95-6 to '98-9
SUNY	2,156	2,465	2,375	2,428	2,430	2,279	2,181	2,061	1,849	1,780	1,869	-18.9%
Independent	851	1,046	1,191	1,274	1,267	1,157	996	874	729	769	779	-37.0%
CUNY	597	700	783	826	844	846	751	586	562	517	532	-33.6%
Regents	82	91	107	98	128	165	174	180	182	185	185	10.4%
TOTAL	3,686	4,302	4,456	4,626	4,669	4,447	4,102	3,700	3,322	3,250	3,365	-25.3%

Sources: IPEDS, NCES; Center for Health Workforce Studies

In 1998-99 the independent colleges and universities produced more than twice as many bachelors degrees in nursing as the second largest producer, SUNY (Exhibit 1-7 and 1-8). The nursing school deans expect the numbers of bachelors degrees in nursing to decline somewhat in all four institutional sectors over the next two years. These estimates are quite reliable because they represent students already in the educational pipeline.

**Exhibit 1-6. Associate Degrees in Nursing in New York State
By Institutional Sector, 1990-91 to 2000-01**



Sources: IPEDS, NCES
Center for Health Workforce Studies

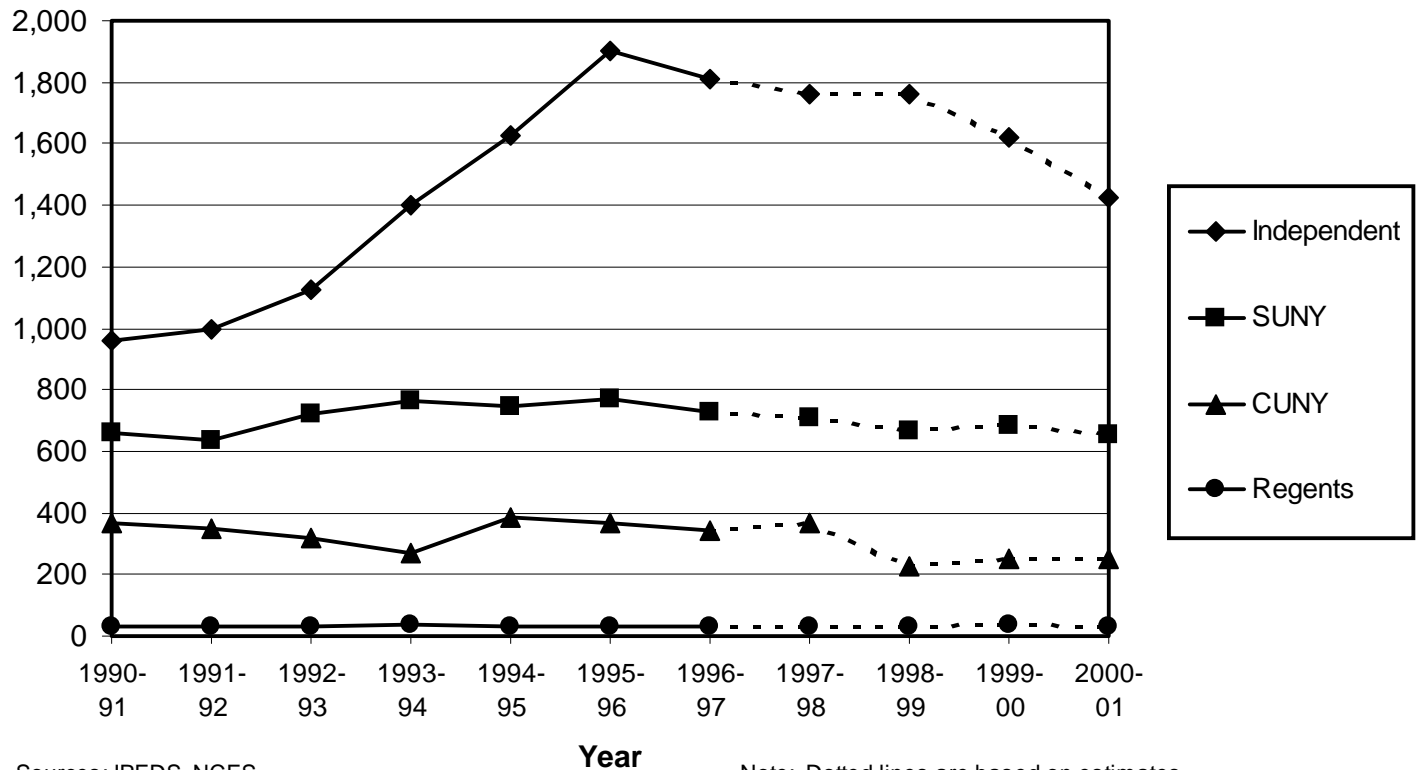
Note: Dotted lines are based on estimates provided by nursing education programs.

**Exhibit 1-7. Bachelors Degree Nursing Program Graduates in New York State
by Institutional Sector, 1990-91 to 2000-01**

Award Type												% Change 95-6 to '98-9
	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	
SUNY	660	637	719	766	748	768	729	711	667	683	653	-13.2%
Independent	960	996	1,124	1,401	1,624	1,901	1,808	1,765	1,762	1,618	1,427	-7.3%
CUNY	368	349	319	267	388	364	341	368	225	248	248	-38.3%
Regents	31	30	29	35	31	29	33	29	33	36	34	11.2%
	2,019	2,012	2,191	2,469	2,791	3,062	2,911	2,873	2,686	2,585	2,362	-12.3%

Sources: IPEDS, NCES; Center for Health Workforce Studies

**Exhibit 1-8. Bachelors Degrees in Nursing in New York State
By Institutional Sector, 1990-91 to 2000-01**



Sources: IPEDS, NCES
Center for Health Workforce Studies

Note: Dotted lines are based on estimates provided by nursing education programs.

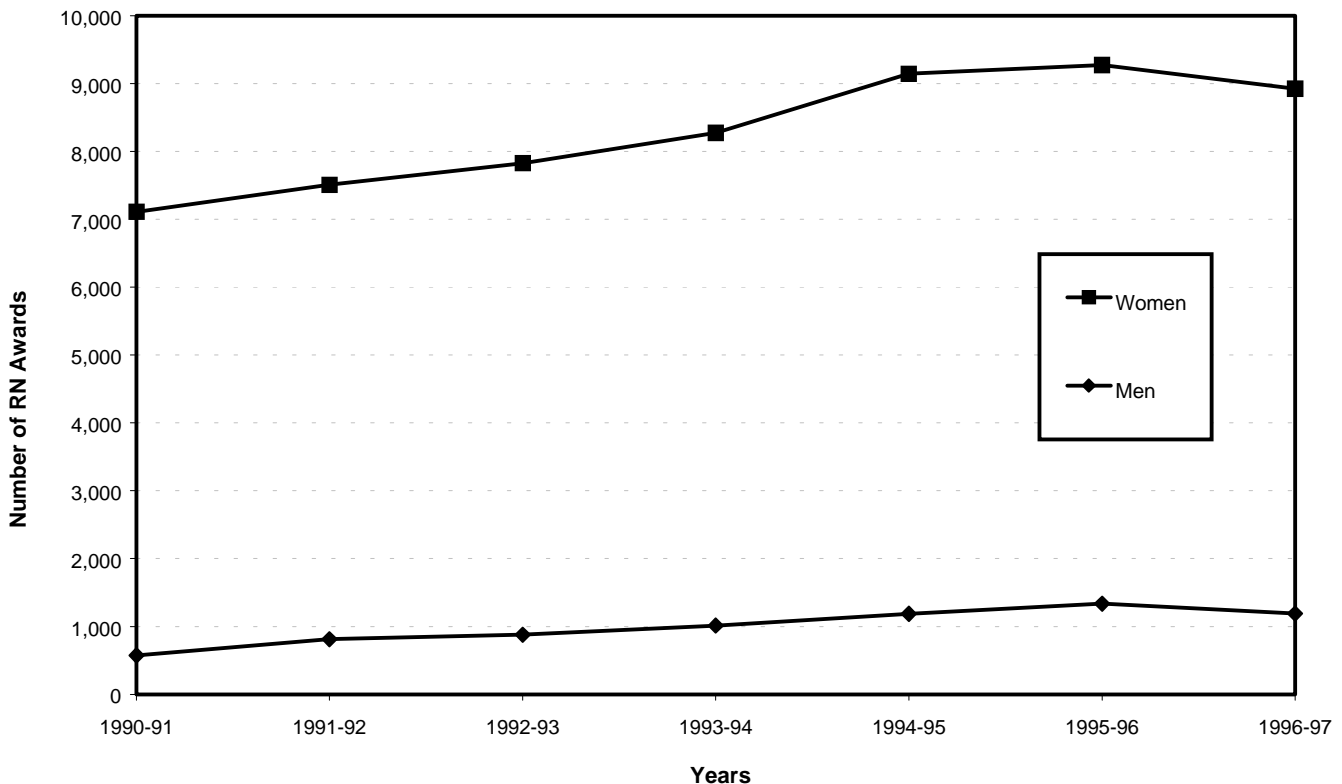
DEMOGRAPHIC CHARACTERISTICS OF RN GRADUATES

This section of the report describes the demographic characteristics of the recipients of new RN awards in New York State from 1990-91 to 1996-97. Charts are presented that describe the gender and racial-ethnic composition of the RN awardees in New York State for different groupings of programs.

Gender

Exhibit 1-9 shows that the percentage of nursing education program awards that are women remains high in New York State, with nearly 88% female in 1996-97. It is interesting that the percentage of awards to men grew by 50% during the 1990s, from 8% in 1990-91 to 12% in 1996-97.

**Exhibit 1-9. Nursing Program Awards in New York State
By Gender, 1990-91 to 1996-97**



Center for Health Workforce Studies

Source: IPEDS, NCES

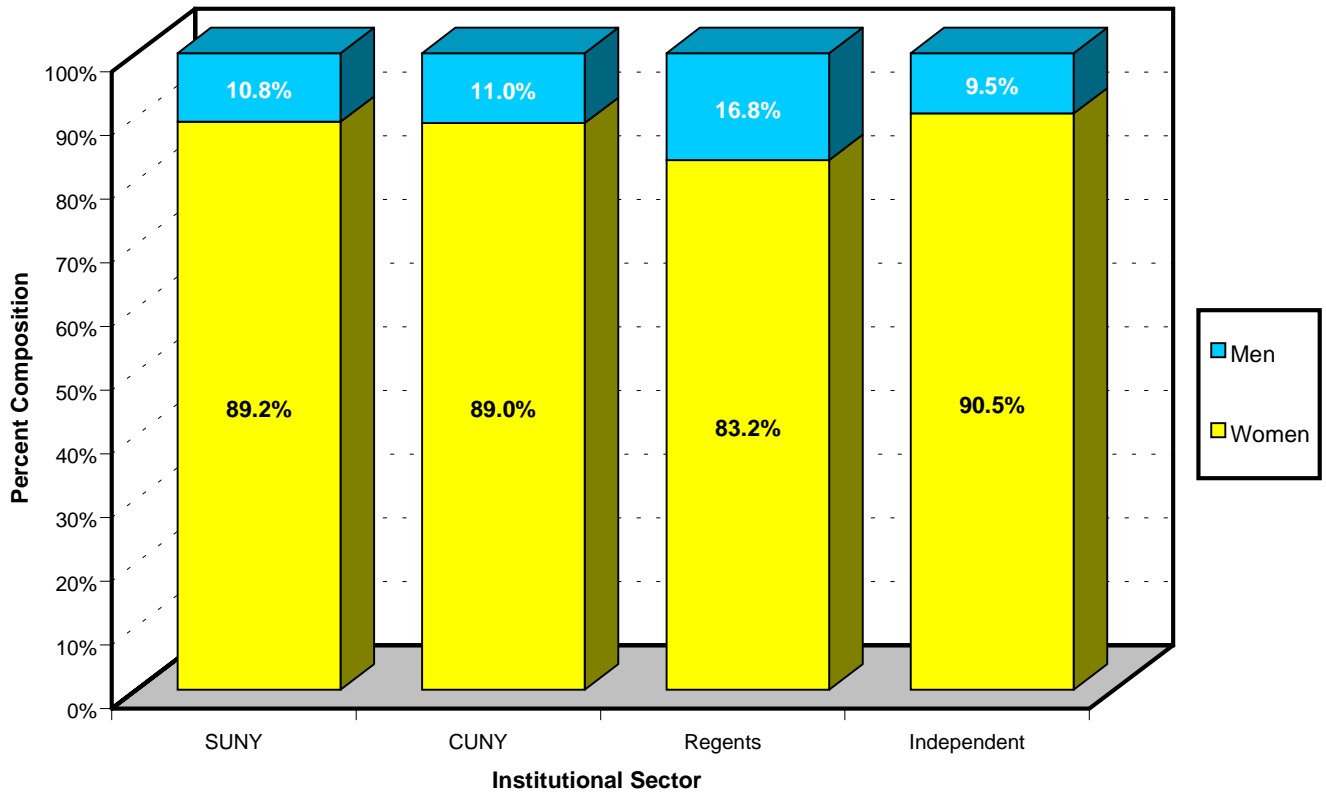
Exhibit 1-10 shows the gender composition of the people completing RN programs in the four institutional sectors in 1996-97. The Regents programs had the largest percentage male at 16.8%, while the independent colleges had the lowest percent male at 9.5%. SUNY and CUNY were nearly identical at 10.8% and 11.0% male, respectively.

The percentages of RN awardees that were male for the four different award types for 1996-97 are shown in Exhibit 1-11. Associate degree RNs had the highest percent male at 14%, while diploma and bachelors degree RNs were 11% male.

Racial Ethnic Category

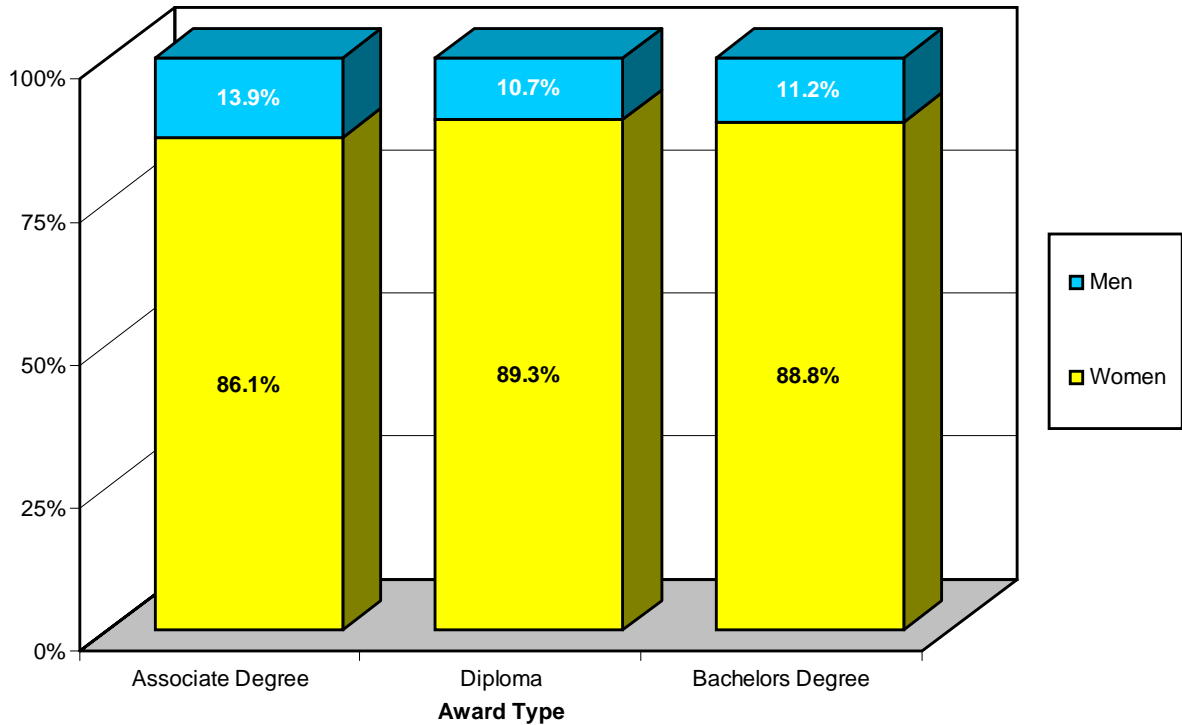
The racial-ethnic composition of RN program graduates is presented in this section. The categories used in the charts are non-Hispanic white; under-represented minorities (i.e., blacks, Hispanics, and Native Americans); and other (Asian and Pacific Islander). Exhibit 1-12 shows that the number of all three groups changed little between 1994-95 and 1996-97. There was a

Exhibit 1-10. Gender Mix of Nursing Program Graduates in New York State by Institutional Sector, 1996-1997

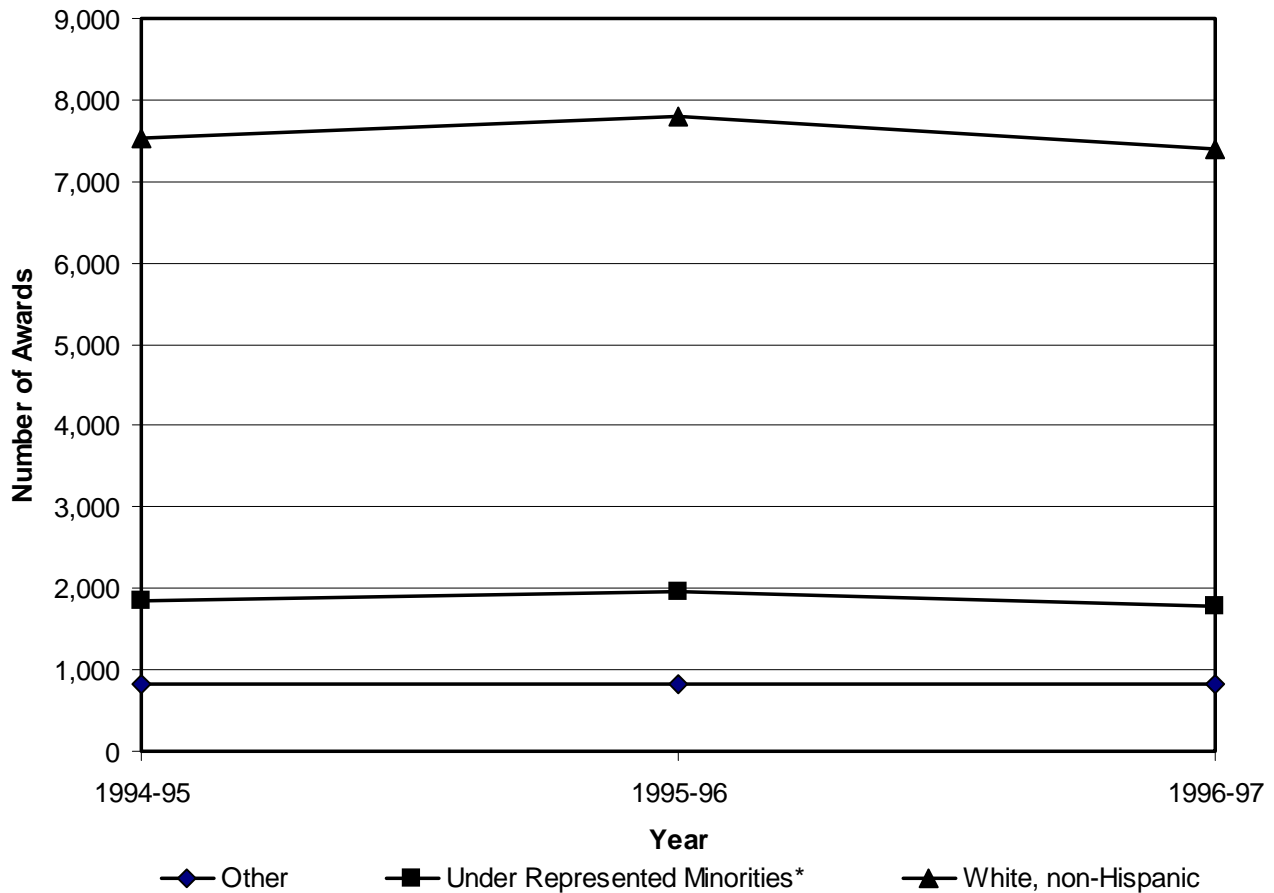


Source: NCES, IPEDS

Exhibit 1-11. Gender Mix of Nursing Program Graduates in New York State by Award Type, 1996-97



**Exhibit 1-12. Racial-Ethnic Mix of Nursing Program Awards
New York State, 1994-95 to 1996-97**



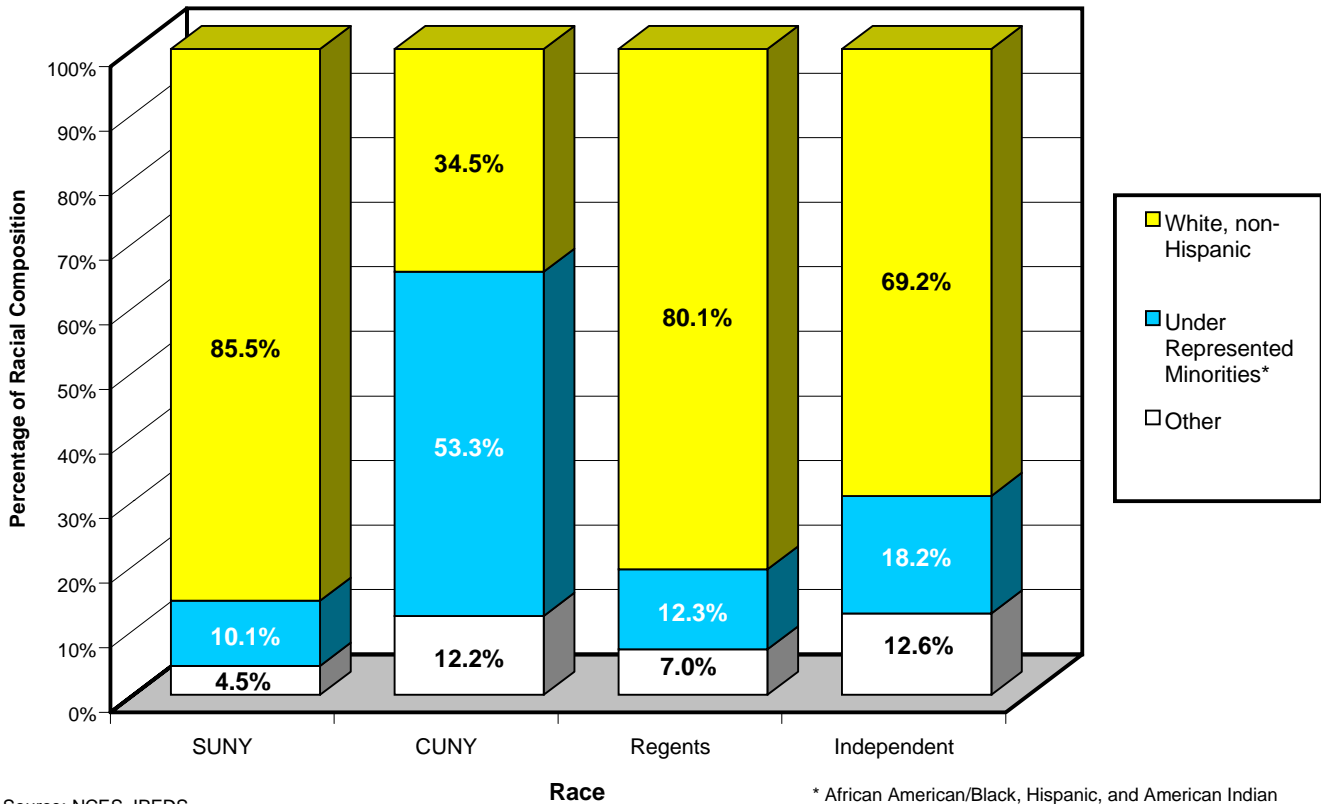
Source: NCES, IPEDS

* African American/Black, hispanic, and American Indian

slight increase in all three groups in 1995-96 that corresponded to the overall rise in nursing graduations across the state.

Exhibit 1-13 shows significant variations in the racial-ethnic mix of graduates across the four institutional sectors, with SUNY having the smallest proportion of under-represented minorities, CUNY having the largest, and the programs of Regents College and the independent colleges in between. These differences tend to reflect the racial-ethnic populations in the communities in which the respective institutions are located. Thus, it is not surprising that CUNY has the largest proportion of under-represented minorities, because New York City has the largest proportion of under-represented minorities in its general population.

Exhibit 1-13. Racial-Ethnic Mix of Nursing Program Graduates in New York State by Institutional Sector, 1996-1997

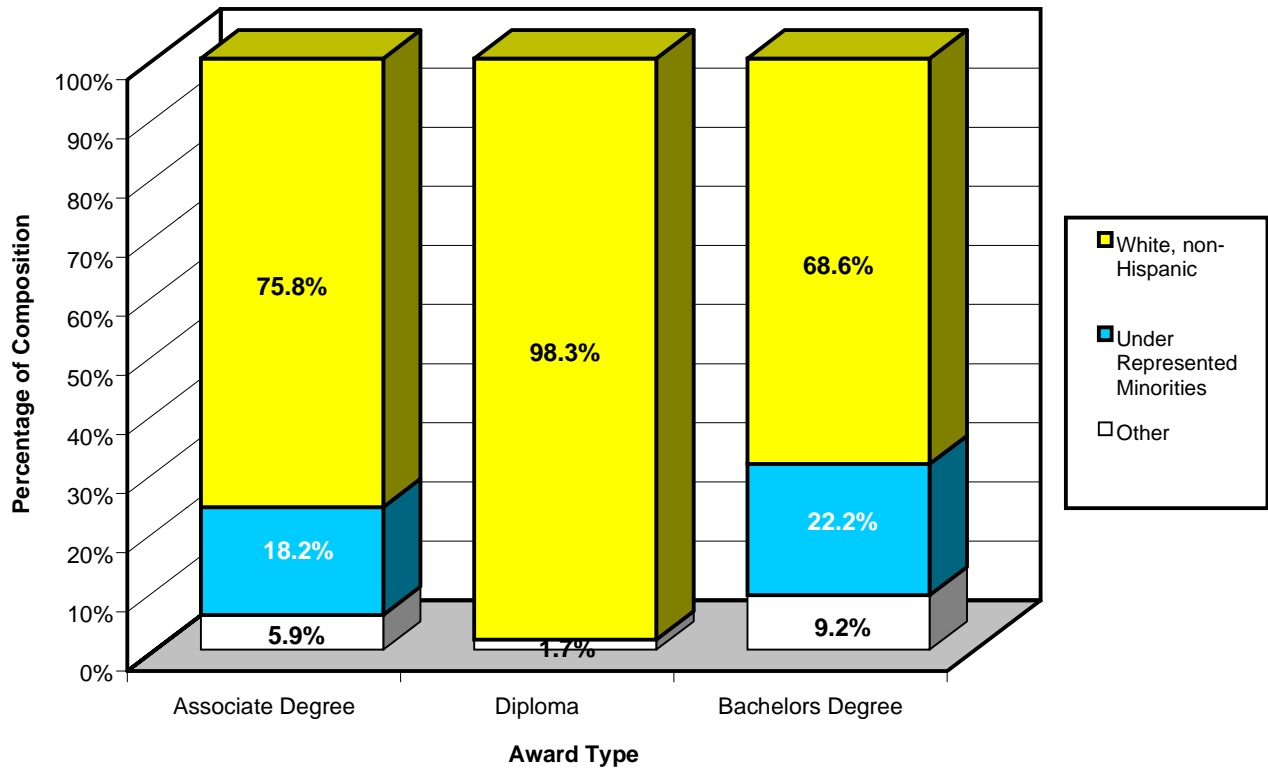


Source: NCES, IPEDS

The racial-ethnic mix of RN awardees for different program levels is shown in Exhibit 1-14. The highest proportion of under-represented minorities in 1996-97 was for bachelors degree RNs (22%), with the proportion for associate degrees a close second (18%). The diploma programs are most different from the other program levels, with essentially no under-represented minorities, but there were only three of these programs remaining in the state in 1996-97 and the total number of awards was small.

The racial-ethnic composition of nursing graduates varies significantly by region within the state, with the patterns generally following the racial-ethnic composition of the general population (Exhibit 1-15). In 1996-97 New York City had the highest proportion of under-represented minorities (51%), with the neighboring Hudson Valley (23%) and Long Island (14%) regions running second and third. The upstate regions were all clustered between 5% and 7%.

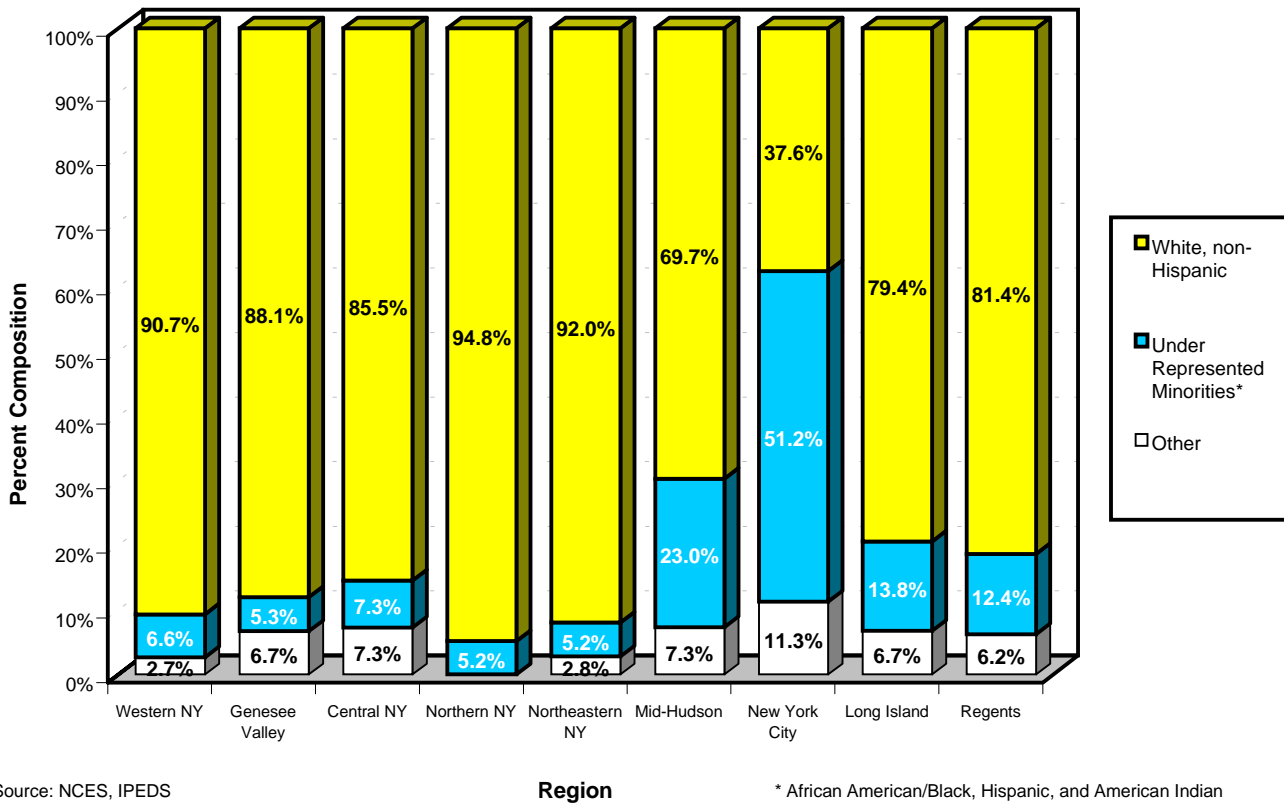
**Exhibit 1-14. Racial-Ethnic Mix of Nursing Program Awards
New York State, by Award Type, 1996-1997**



Source: NCES, IPEDS

* African American/Black, Hispanic, and American Indian

**Exhibit 1-15. Racial-Ethnic Mix of Undergraduate Nursing Program Awards
New York State, by Regents Region, 1996-1997**



Source: NCES, IPEDS

* African American/Black, Hispanic, and American Indian

FUTURE TRENDS

The exhibits in this section present estimates by the Deans of nursing schools in New York State of future nursing programs awards based on a survey conducted in the summer of 1999. A copy of the “fax back” survey instrument used to collect the data is provided in Appendix C. The estimates, which are based on students already enrolled in the programs, indicate a clear downward trend in the number of awards of all types over the next two years. If a shortage of nurses really exists in New York State, as many observers believe, this decline in nursing program awards is likely to make the situation worse.

This section of the report summarizes the responses to several additional questions included in the 1999 Nursing School Dean Survey. These questions focused on trends in new applications and acceptances expected by the Deans in the next two years, along with their assessments of the job market for nurses in New York State.

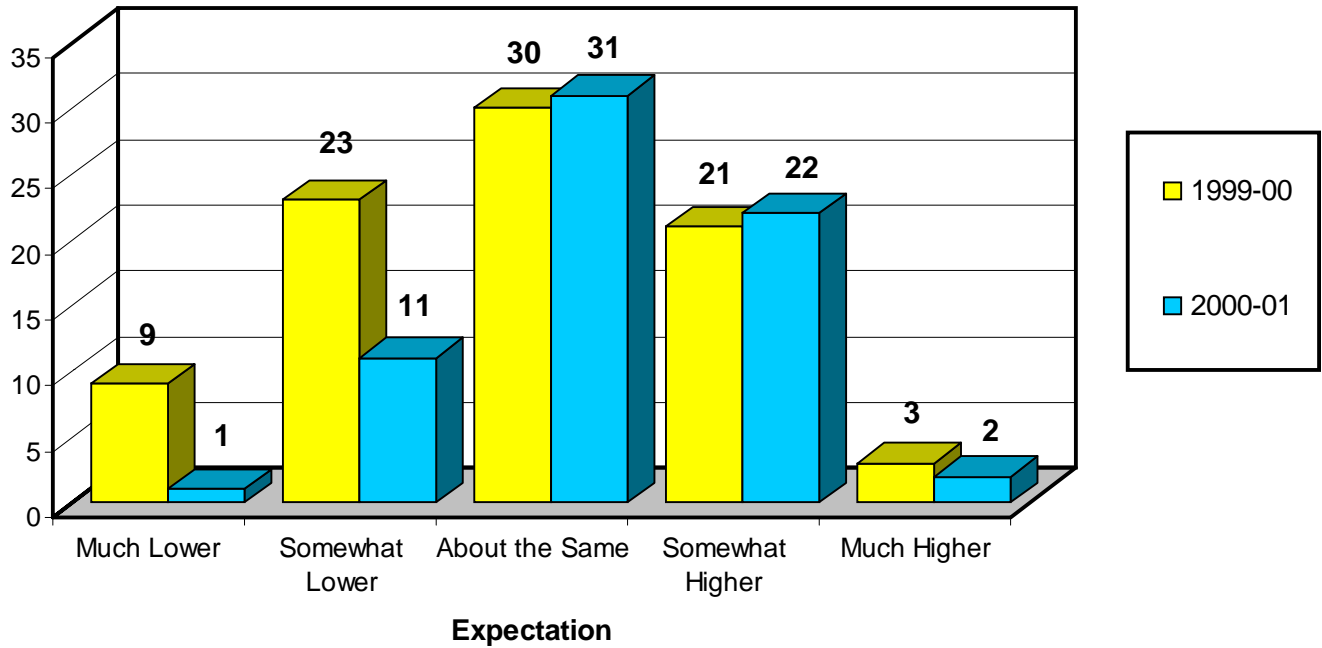
Exhibit 1-16 summarizes the responses to the questions about nursing program applications expected in 1990-00 and 2000-01. The chart shows that, while the deans do not expect major changes in applications in 1990-00, many anticipate a modest increase in 2000-01.

Exhibit 1-17 shows comparable assessments by the Deans of the numbers of acceptances by nursing programs in the state over the next two years. The pattern for acceptances is very similar to that for applications with no major changes expected in 1990-00, and modest increases anticipated in 2000-01.

The Deans were also asked to provide their assessments of the relative numbers of job openings in different health care settings. These assessments, summarized in Exhibit 1-18, indicate that there are generally jobs available for nurses in hospitals, nursing homes, and home care. Even the setting with lowest ratings by the Deans, physician offices, appear to have at least some jobs available.

The final question on the survey asked for a comparison of the overall job market for new registered nurses this year to the job market last year. The responses, summarized in Exhibit 1-19, indicate clearly that the job market has improved dramatically over the past year. None of the Deans rated the job market worse this year than last.

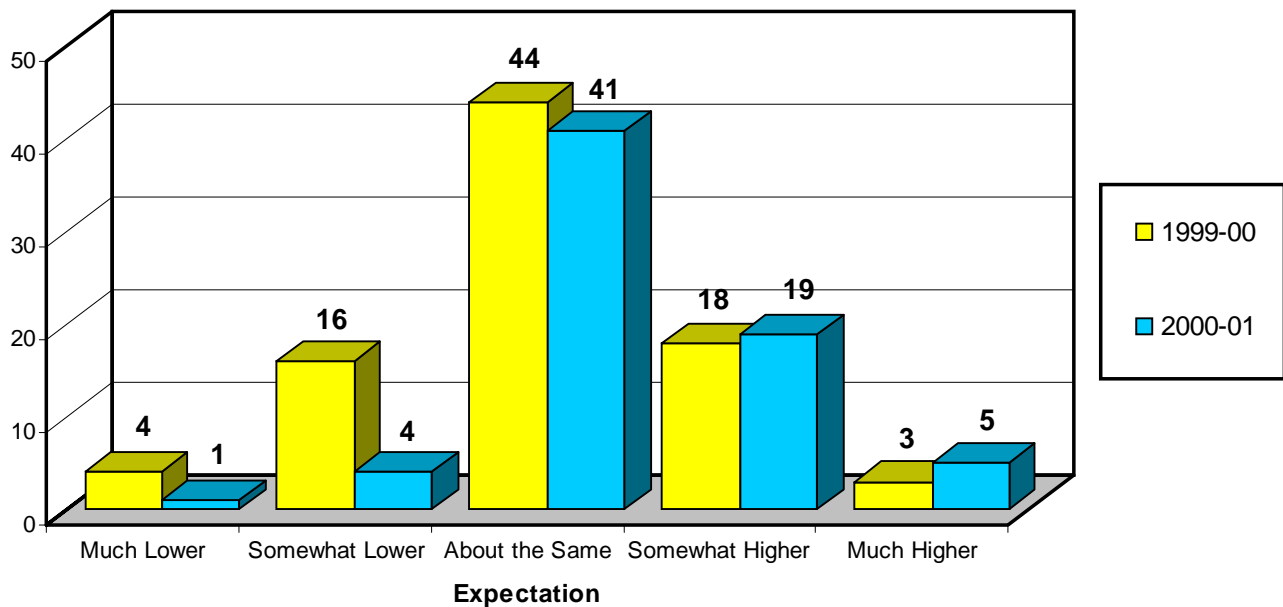
**Exhibit 1-16. Future Nursing Program Applications in New York State
Expectations of Nursing School Deans**



Source: Center for Health Workforce Studies, 1999

Missing Responses: 1999-00: 26
2000-01: 45

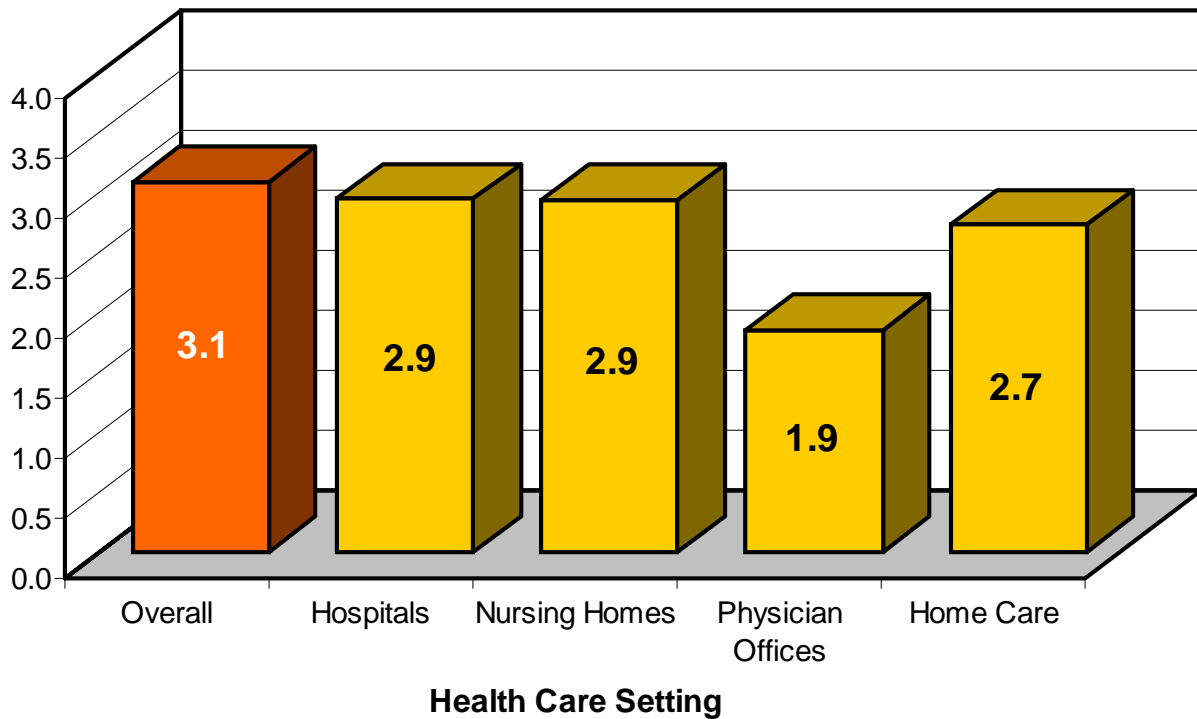
**Exhibit 1-17. Future Nursing Program Acceptances in New York State
Expectations of Nursing School Deans**



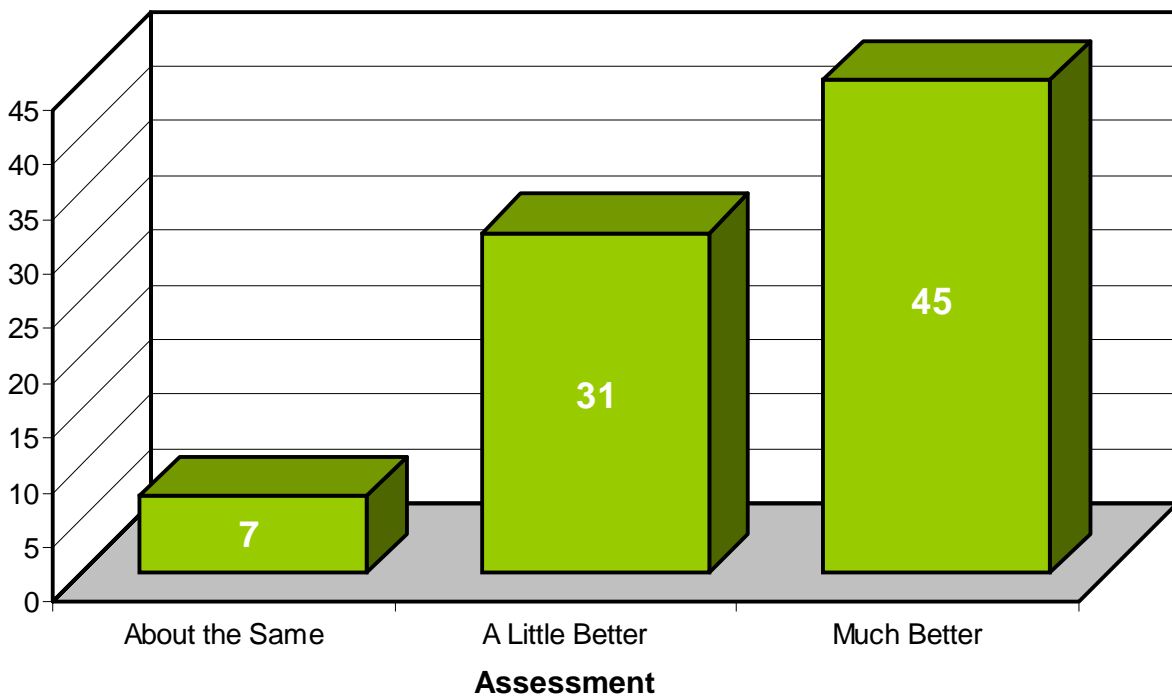
Source: Center for Health Workforce Studies, 1999

Missing Responses: 1999-00: 27
2000-01: 42

**Exhibit 1-18. Job Market for Nurses in New York State
By Health Care Setting, Based on Opinions of Nursing School Deans
(5 point scale: 0 = No Job Openings; 4 = Many Job Openings)**



**Exhibit 1-19. Comparison of Job Market for RNs in 1999 and 1998
Based on Assessments of Nursing School Deans**



Source: Center for Health Workforce Studies

NCLEX Scores

Every quarter a National Council Licensing Examination (NCLEX) is administered to determine who is qualified to be a licensed RN. The pass rates on these exams for graduates of different RN education programs are one indicator of the quality/effectiveness of the respective programs.

Exhibit 1-20 shows the pass rates for five groups of RN education programs for seven recent quarters. The figures show that over the seven quarters SUNY RN programs had the highest pass rate (87%). The SUNY programs had the best pass rates for the first three of seven quarters, and dipped slightly below the rate for the Regents programs for the last four quarters. The SUNY programs had higher pass rates than the independent programs for all seven quarters.

**Exhibit 1-20. NCLEX Pass Rates in New York State
By Institutional Sector, Q1, 1997 to Q3, 1998**

SECTOR	Q1, '97	Q2, '97	Q3, '97	Q4, '97	Q1, '98	Q2, '98	Q3, '98	Overall
SUNY	82%	89%	90%	82%	87%	75%	85%	87%
CUNY	70%	80%	81%	65%	78%	64%	79%	75%
Regents	81%	87%	85%	85%	89%	82%	87%	85%
Independent	79%	71%	81%	71%	81%	73%	79%	78%
Hospital	75%	86%	90%	80%	79%	72%	80%	83%
Average	79%	83%	87%	78%	85%	75%	83%	83%

Center for Health Workforce Studies, 1/00

Pass rates for individual SUNY campuses are provided for 1997, 1998, and 1999 in a special statistical report that presents a variety of data about each of the 43 SUNY campuses with nursing education programs.

Chapter 2

CHARACTERISTICS AND EMPLOYMENT EXPERIENCES OF RECENTLY LICENSED REGISTERED NURSES IN NEW YORK STATE

To help understand the current job market for RNs in New York State, a special survey was conducted to gather data from recently licensed RNs in New York State. The *1999 Survey of Recently Licensed Registered Nurses in New York State* was designed to collect information from individuals licensed as RNs in New York State during 1998. The survey questionnaire, a copy of which is reproduced in Appendix B, covered the following topics:

- Demographic Characteristics: Gender, age, citizenship status, race/ethnicity, presence of minor children in the home, current employment status and licensure history in other states/countries.
- Education and Training: Location of basic nursing education program, whether it was part of the SUNY system and additional nursing and non-nursing education completed.
- Current Employment: Number of positions employed as RN, principal and secondary practice setting, percent of time spent in direct patient care, practice zip code, hours per week and weeks per year worked as an RN, principal job activity, primary patient population, # months employed as RN in NYS, shifts worked, expectations for remaining with current employer, job and salary satisfaction, annual RN salary, reasons for choosing current position and conditions under which respondents are willing to work additional hours.
- Most Recent Job Search Experience: Difficulty finding a position, # months to find a position, change of employment plans because of limited RN opportunities, total # of positions applied for and total # number of job offers.
- Impression of Job Market for RNs: Geographical area for which respondent is most familiar with the job market, assessment of job market by setting and overall assessment of job market for RNs.
- RN Curriculum: Adequacy of preparation in several areas by basic nursing program, effect of basic nursing program characteristics on educational experience.

The survey responses provide a snapshot of the job market for those with little or no RN experience. It also permits an assessment of the contributions made by RN education programs

of different institutional sectors, levels, and geographic regions to the supply of RNs in New York State.

Methodology

In June, 1999 the Center for Health Workforce Studies (CHWS) began conducting the *1999 Survey of Recently Licensed Registered Nurses in New York State*. The NYS RN licensure file for 1998 was obtained from the New York State Education Department, retaining only those RNs who had become licensed in NYS for the first time between October of 1997 and September of 1998. Of the 8,273 on the original list, 7,981 had valid mailing addresses and were living in either the U.S. or Canada. The survey was sent to this entire group. A total of 4,583 RNs (57.4%) responded to the survey over three mailings: The first, conducted in late June of 1999, yielded a response rate of 34.1% (n=2725); the second mailing, conducted in August, 1999, yielded an additional 16.1% (n=1288); and the third mailing, conducted in October, 1999, yielded the final 7.1% (n=570).

Each survey packet included a cover letter from CHWS, a double-sided two page survey, a coding sheet (coincided with a question asking what nursing program they attended), a business reply envelope with which to return the survey, and an incentive business- reply postcard wherein respondents could request a summary of the study results. For each mailing, there was a 3 week deadline within which recipients were asked to respond.

Sample Characteristics

Exhibit 2-1 summarized the demographic and basic educational/practice characteristics of the entire set of respondents, with breakouts for nurses trained at the Associate and Bachelors levels. Nurses who had earned associate degrees looked quite different than nurses who had earned baccalaureate degrees. The Associate degree RNs were 5 years older; were slightly more likely to be male (11% versus 9%); more likely to be US citizens, more likely to be white and less likely to be Asian, much more likely to have minor children living at home, more likely to have graduated from a SUNY RN program, and less likely to have been licensed as an RN in another state before New York.

Exhibit 2-1. Characteristics of Survey Respondents

Characteristic	Associate (n=2275)	Bachelors (n=1618)	All
Age	35.5 yrs	30.8 yrs	34.3 yrs
Gender (% Female)	89.4%	91.2%	90.5%
Citizenship status			
Native Born U.S.	80.9%	75.7%	70.4%
Naturalized U.S.	9.3%	9.3%	8.5%
Permanent Resident	8.6%	11.5%	10.8%
H-1, H-2, H-3 Temporary Worker	0.3%	1.3%	0.8%
Other	0.9%	2.1%	2.4%
Race/Ethnic category			
Asian or Pacific Islander	3.4%	12.0%	8.1%
Black/African American (not Hisp)	11.3%	9.1%	10.0%
Hispanic/Latino	3.8%	4.3%	3.8%
Native American/Alaskan	0.4%	0.2%	0.3%
White (not Hispanic)	77.9%	72.6%	73.5%
Other	3.2%	1.8%	2.8%
Minor children living at home	55.4%	30.5%	45.0%
Highest nursing educational level			
RN Diploma			8.6%
Associate Degree			51.1%
Baccalaureate Degree			36.2%
Graduate Degree			3.8%
Educational sector			
State University of New York	49.6%	11.7%	30.0%
City University of New York	12.8%	4.9%	8.4%
Independent Colleges	19.0%	42.4%	26.6%
Regents Distance Program	2.7%	0.1%	1.4%
Nursing Program in Other State/Territory	13.5%	32.0%	24.6%
Nursing Program in Foreign Country	2.3%	9.0%	9.0%
Working a position requiring an RN license	90.6%	91.4%	90.1%
Licensed as RN in another state before NY	16.6%	37.6%	32.3%

Inexperienced RNs

Of the 4,583 RNs who responded to this survey, 1,929 (42%) were “inexperienced” nurses, defined as those who had worked for less than 12 months as an RN. The primary reason that so many “experienced” RNs were being licensed for the first time in NYS in 1998 is that many of

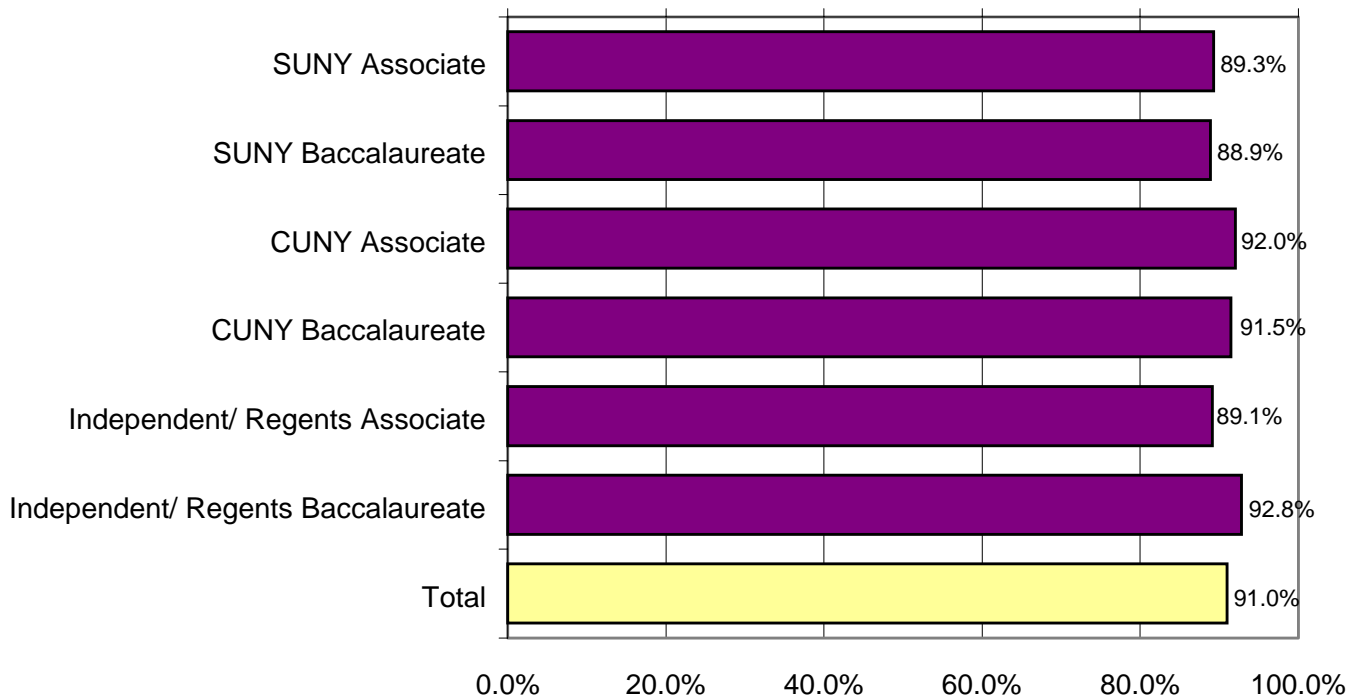
them were licensed as RNs in other states prior to 1998. The remainder of the experienced RNs were licensed in the beginning of 1998 and responded to the survey in late 1999, thus accruing more than 12 months of work experience between licensure and the survey.

Because the original objective of the survey was to measure the experiences of recently licensed RNs in the marketplace, and RNs with greater than one year of work experience may have significantly different job market experiences, the remainder of this report will focus on just the 1,929 inexperienced RNs.

Demographic Characteristics by Educational Level and Sector

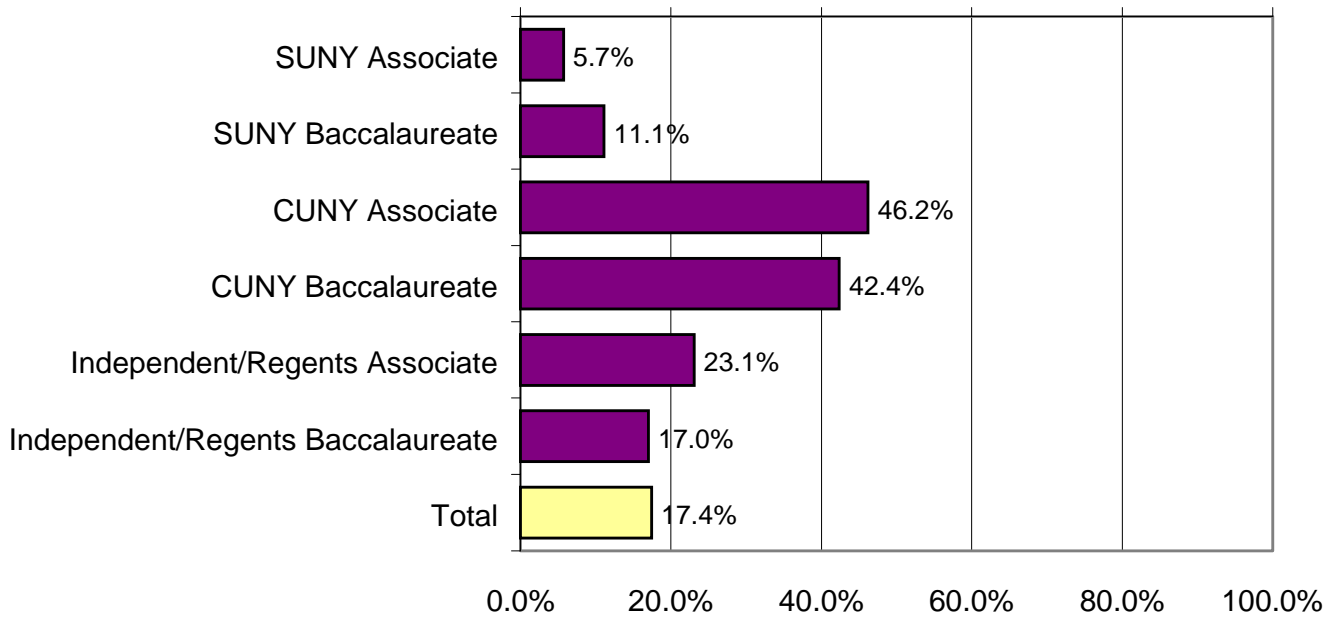
In 1998, 9% of recently licensed RNs in this sample were male, twice the percentage male for all RNs in New York State in 1995. The gender mix for different program types and institutional sectors, shown in Exhibit 2-2, varied only slightly around this number. Independent/Regents baccalaureate degree programs had the highest percentage female (92.8%) and SUNY baccalaureate programs had the lowest (88.9%).

Exhibit 2-2. Recently Licensed RNs in NYS: % Female



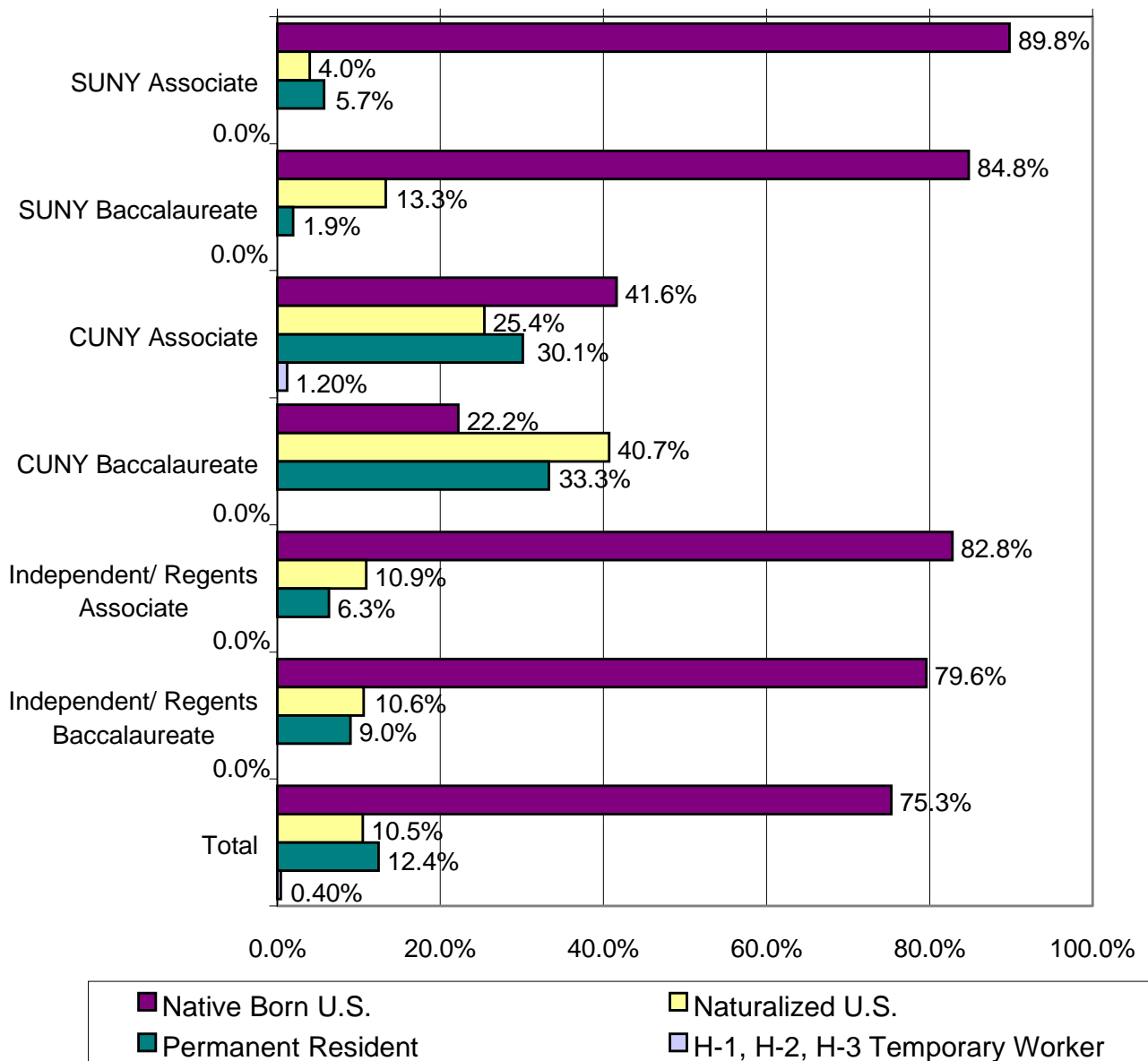
The race/ethnicity compositions of the different educational sectors generally reflect the racial composition of the geographic areas in which the schools are located. Exhibit 2-3 shows that those attending CUNY schools are less likely to be White than those attending SUNY or Independent schools, which are largely located in upstate New York and Long Island.

**Exhibit 2-3. Recently Licensed RNs:
Under-Represented Minorities**



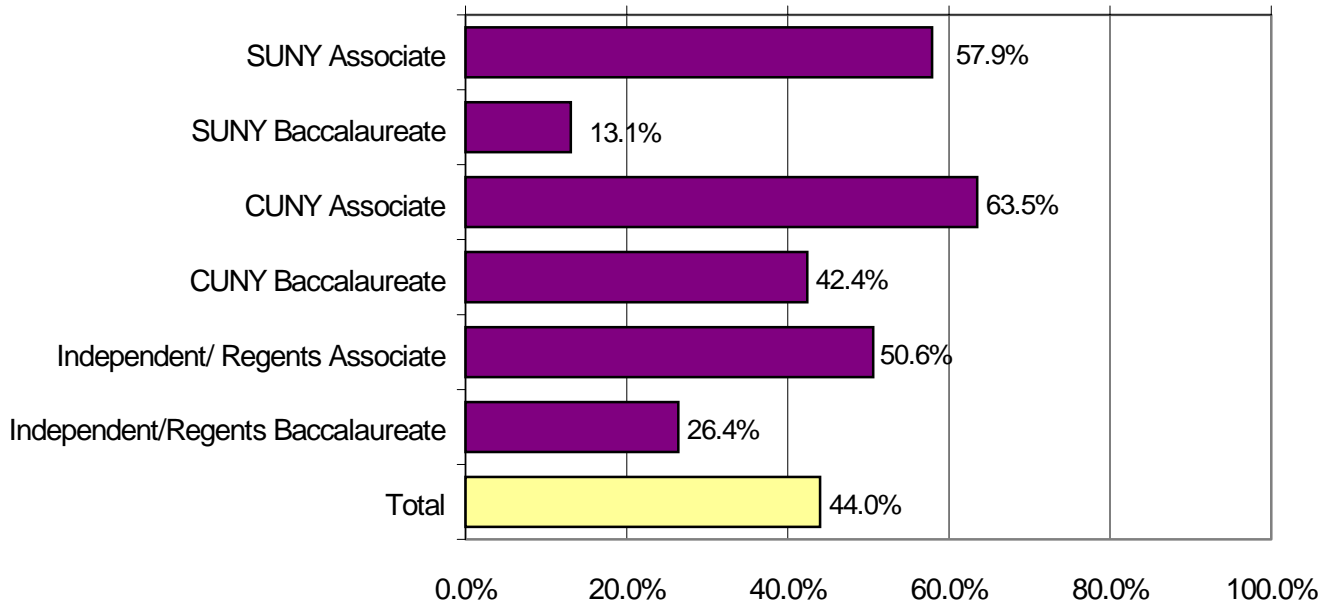
Much like the racial composition of the different educational sectors, citizenship status reflects the geographic area that the schools reside in. Exhibit 2-4 shows that non-citizens are more likely to live in New York City than in upstate New York or Long Island and so they are more concentrated in the CUNY system than in either the SUNY system or the independent schools. Associate degree programs appear to be slightly more likely to enroll U.S. citizens than baccalaureate programs, but this difference is very small.

Exhibit 2-4. Recently Licensed RNs in NYS: Citizenship



Associate degree graduates are more likely to have children than baccalaureate degree graduates. This is particularly noticeable within the SUNY system as can be seen in Exhibit 2-5.

**Exhibit 2-5. Recently Licensed RNs in NYS:
Presence of Minor Children in the Home**



As we can see from Exhibit 2-6, associate degree graduates are older than baccalaureate degree graduates. Special note should also be taken that the average age of recently licensed nurses was 32 years. This is a much older age of entry than prior studies have indicated, a fact that has serious implications for the aging of the nursing workforce. It also may be an indication that the nursing profession may be having more difficulty than in the past recruiting young people into the profession.

**Exhibit 2-6. Recently Licensed RNs in NYS:
Average Age**

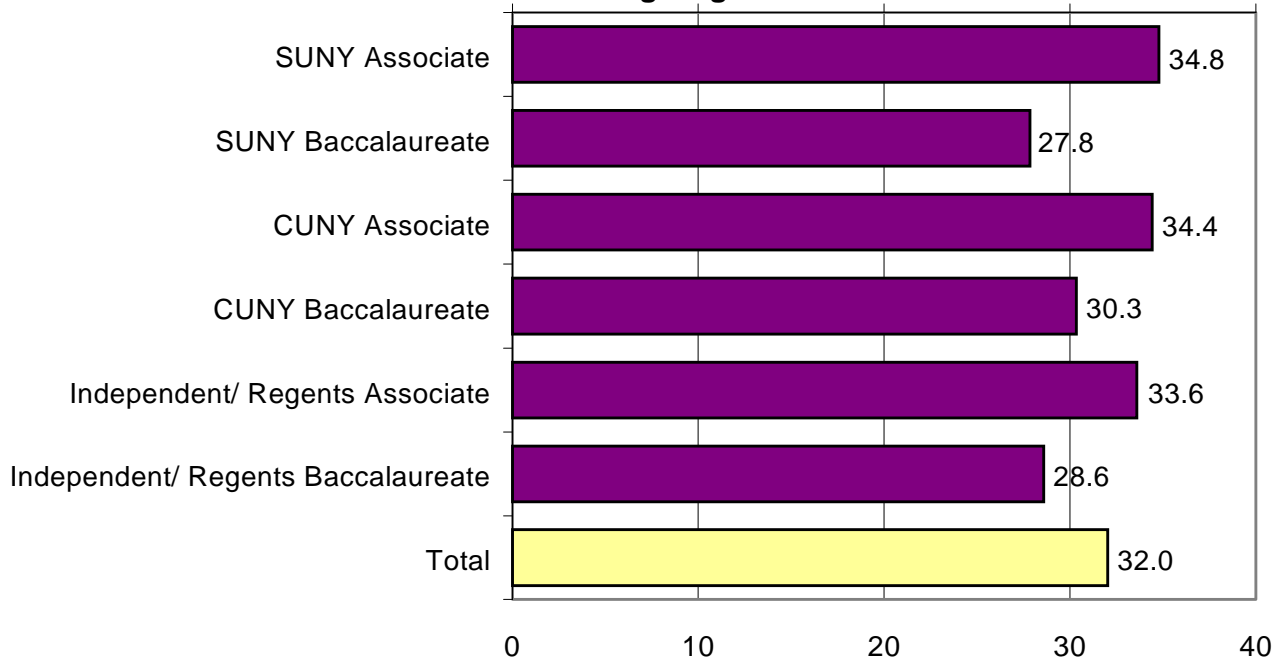
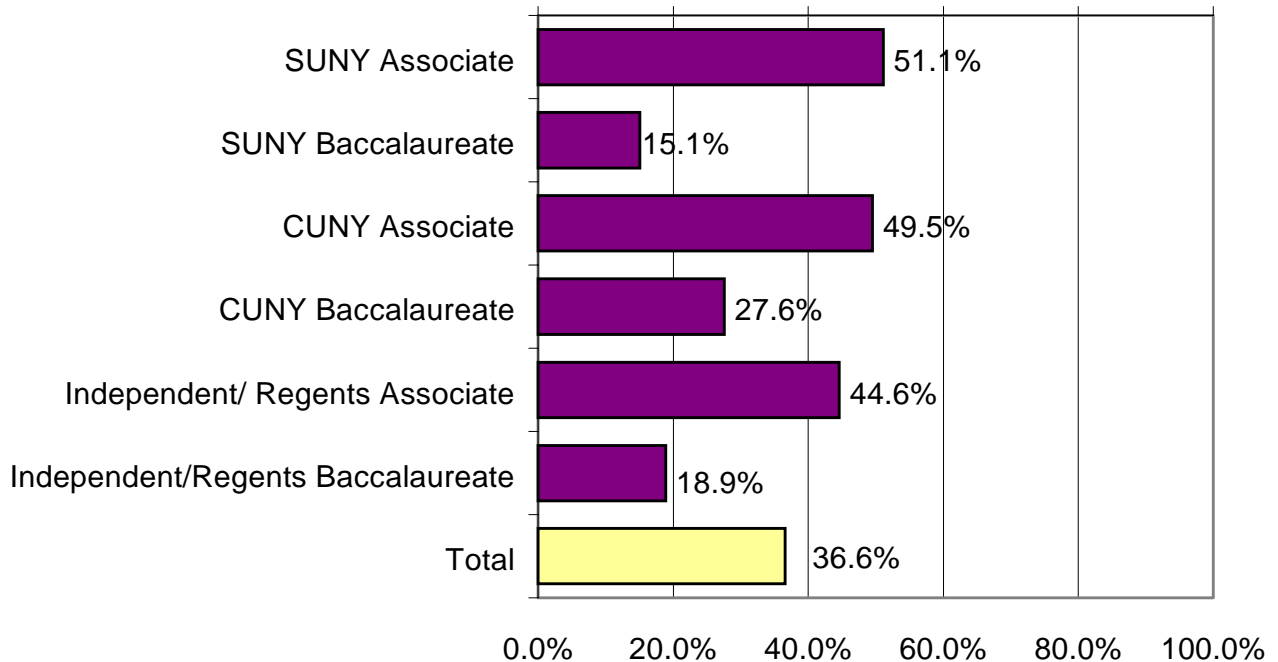


Exhibit 2-7 shows the percentage of recently licensed RNs who are over the age of 35. Over one-third of all recently licensed RNs were over age 35 and this percentage was markedly higher for associate degree RNs than for baccalaureate degree RNs, particularly SUNY program graduates.

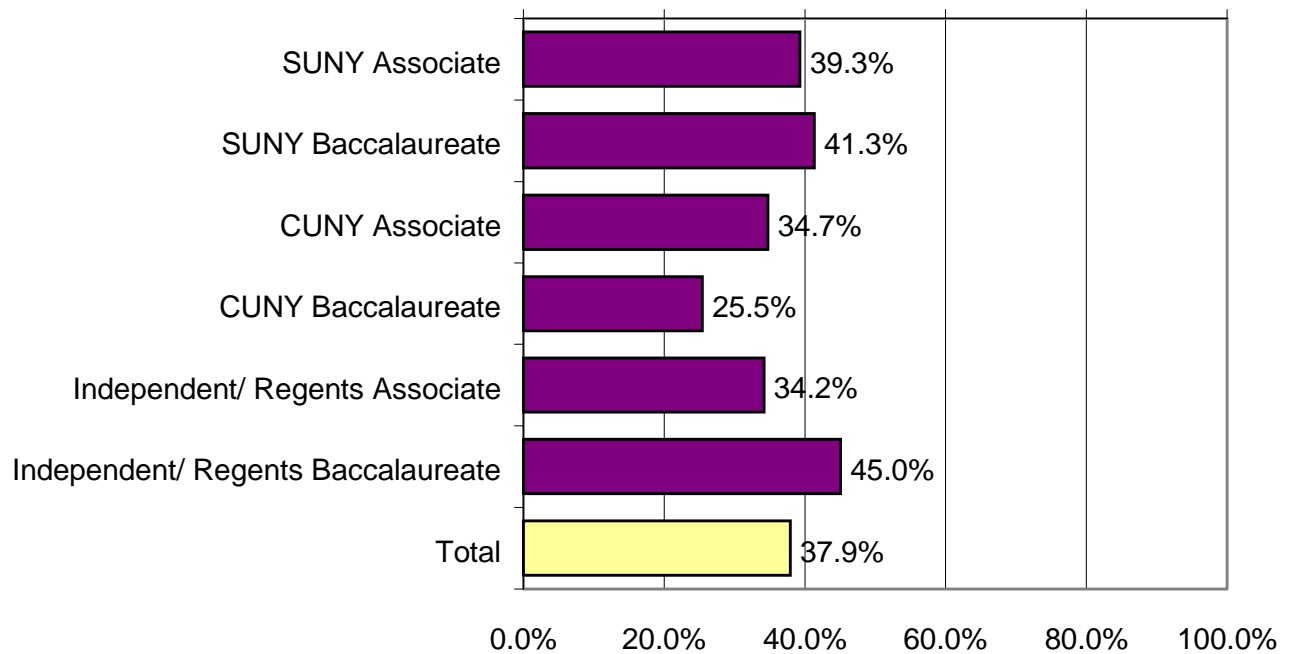
**Exhibit 2-7. Percent of Recently Licensed RNs
Over 35 Years of Age**



Education and Training

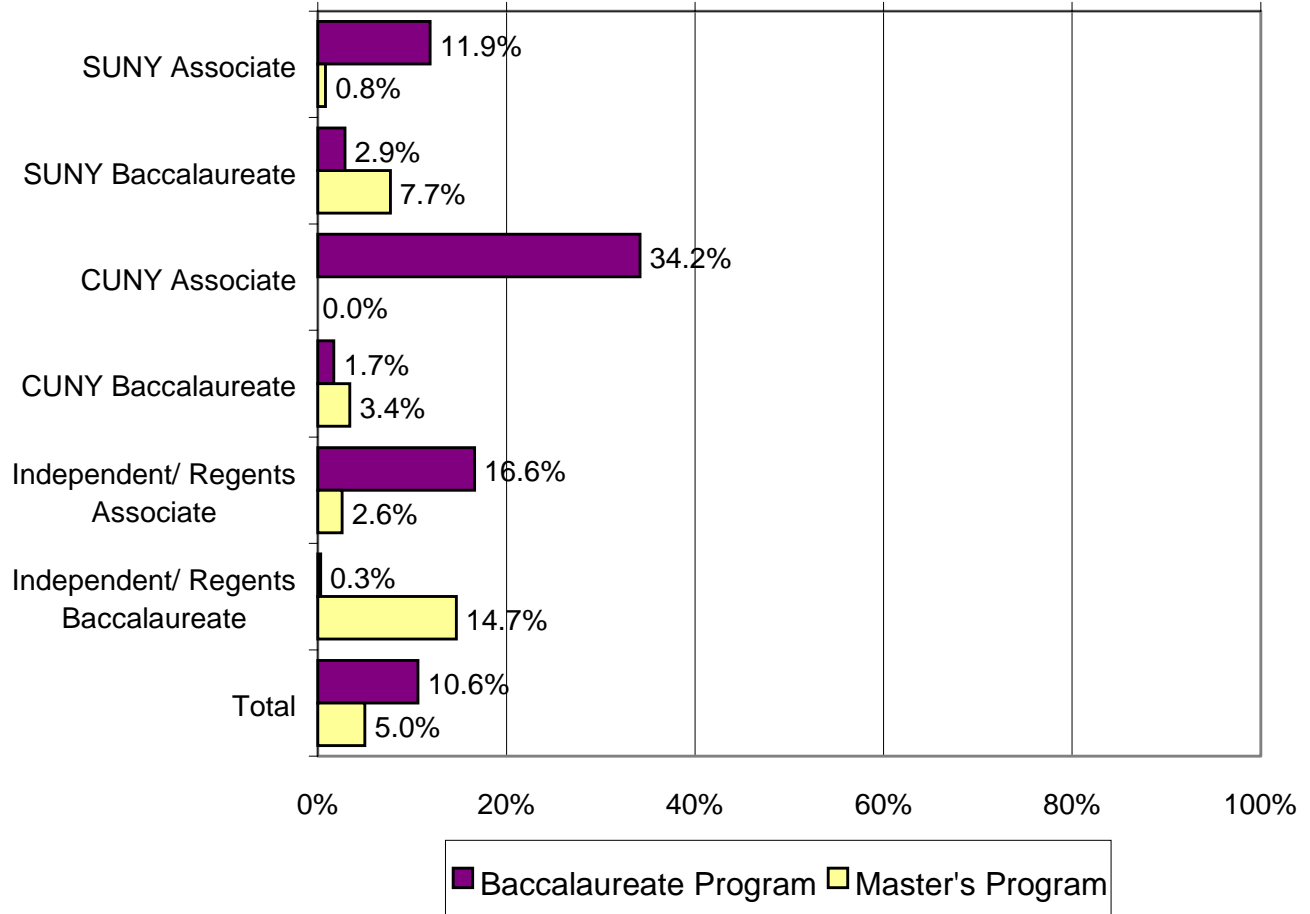
Over one-third of recently licensed RNs have earned a non-nursing degree before becoming licensed as an RN in New York State. Exhibit 2-8 shows that this number is slightly greater for baccalaureate degree graduates than for associate degree graduates, particularly in the Independent Colleges sector. RNs who attended CUNY were the least likely to have earned a non-nursing degree prior to RN licensure, however, more than one-quarter of them had done so.

Exhibit 2-8. Recently Licensed RNs in NYS: % Who Received Non-Nursing Degree Before RN Licensure



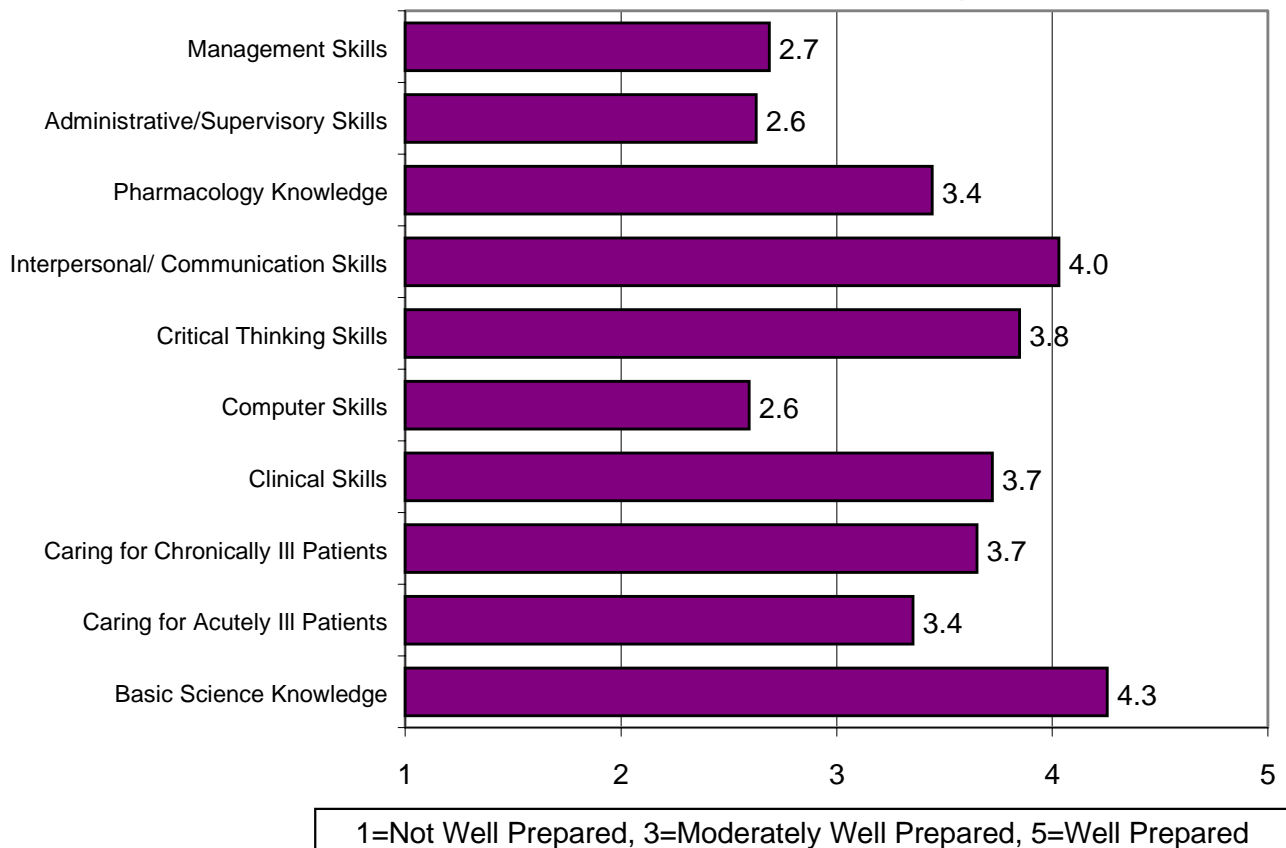
As expected, associate degree nurses were the most likely to be enrolled in another formal nursing program, namely a baccalaureate program. Exhibit 2-9 shows that this is particularly in the CUNY sector.

**Exhibit 2-9. Recently Licensed RNs in NYS:
Currently Enrolled in Another Formal Nursing Program**



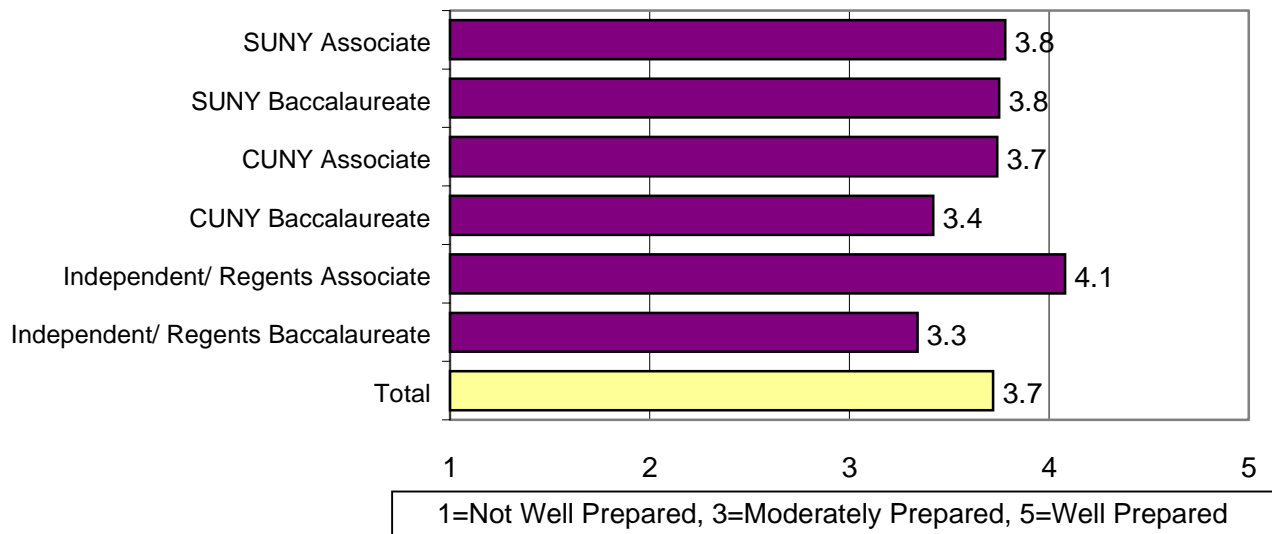
Participants were asked about the adequacy of preparation for the workplace (in 10 different areas) of their RN program. As can be seen in Exhibit 2-10, the only areas which respondents rated as being less than moderately well prepared were computer skills, management skills and administrative/supervisory skills. With curricula that are designed to encompass all aspects of patient care and scientific knowledge relevant to nursing, it is not surprising that supervisory or management skills may be overlooked, particularly in two year programs. Computer skills, however, are increasingly important in all professional fields and particularly in the health professions where patient medical information is becoming more likely to be stored electronically and when a great deal of scientific and medical information can be found on the internet. RNs feel very well prepared in their basic science knowledge, as well as in their interpersonal/communication skills. Critical thinking skills, clinical skills and caring for chronically ill patients are also rated well, with caring for acutely ill patients and pharmacology knowledge coming in shortly behind, although still on the positive side of the scale.

Exhibit 2-10. Adequacy of Preparation of Recently Licensed RNs in NYS, by RN Program

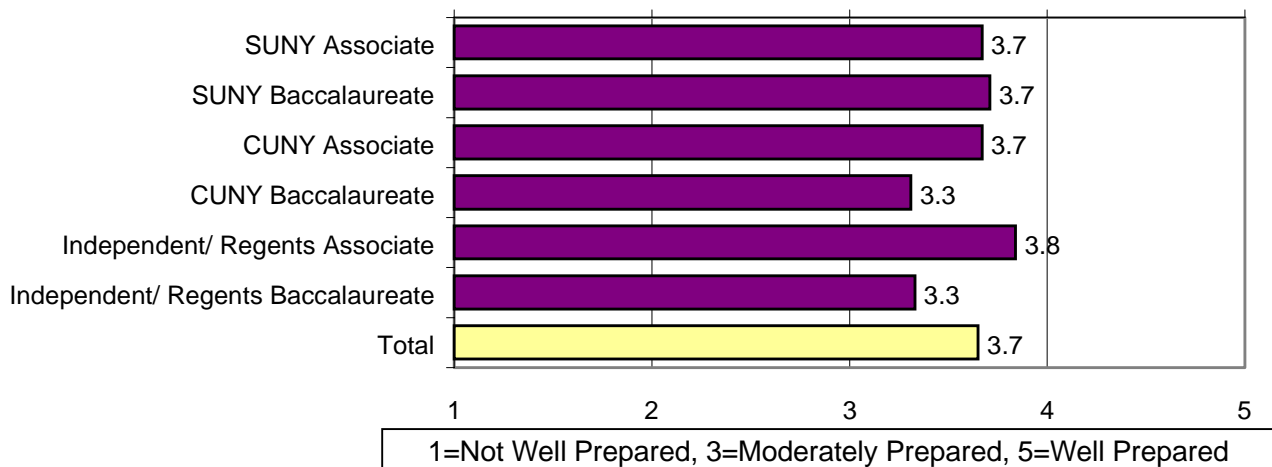


While there were some differences in the perceived adequacy of preparation by educational sector, the most striking differences are by educational level. Exhibits 2-11 through 2-15 display the differences between educational level and sector for clinical skills, caring for chronically ill patients, caring for acutely ill patients, administrative skills and supervisory skills. While the associate degree graduates are more likely to believe they are better prepared for clinical tasks, it is clear that the baccalaureate degree graduates believe they were better prepared for upper level nursing tasks such as administration, supervision and management.

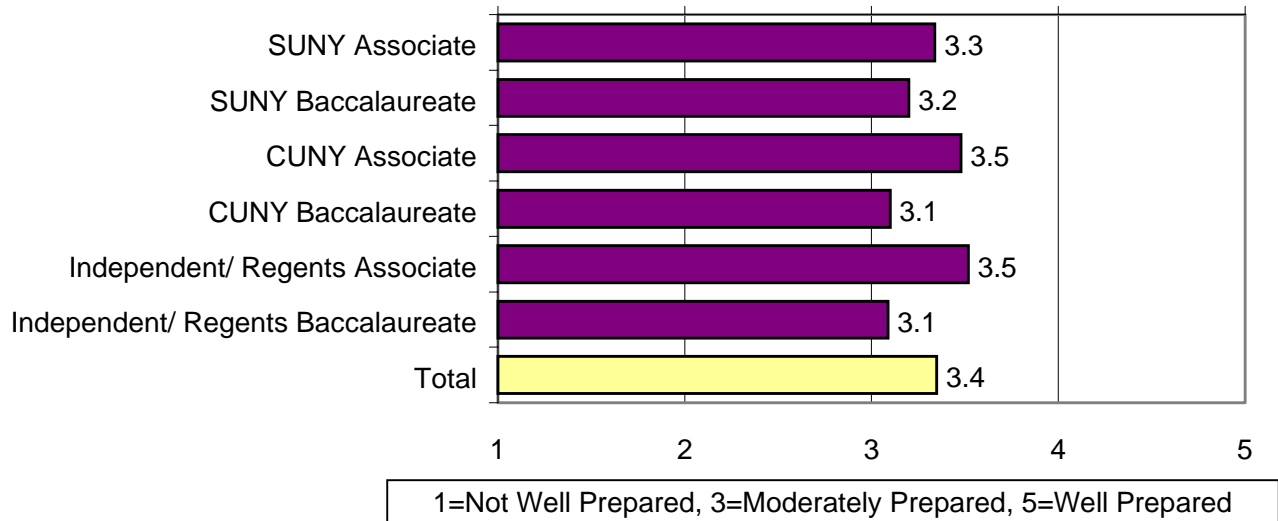
**Exhibit 2-11. Adequacy of Preparation by RN Program:
Clinical Skills**



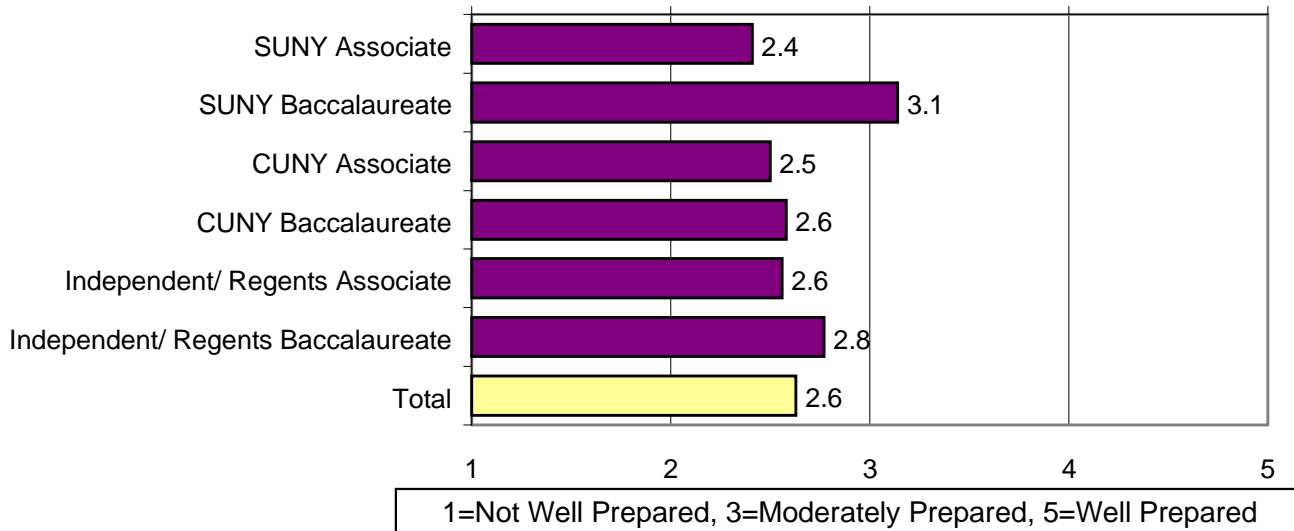
**Exhibit 2-12. Adequacy of Preparation by RN Program:
Caring for Chronically Ill Patients**



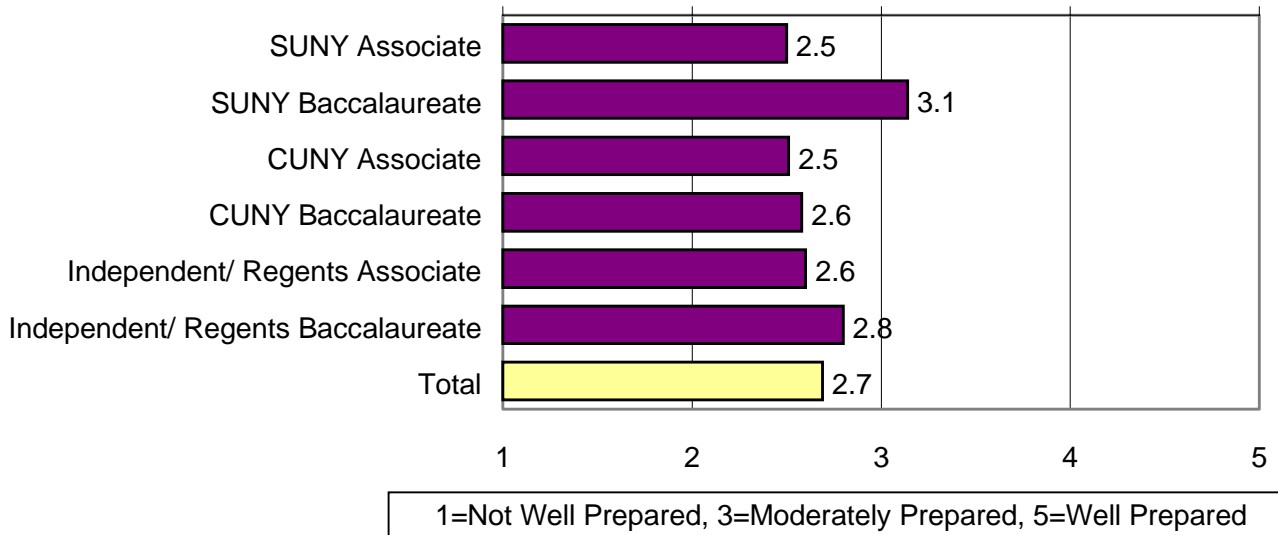
**Exhibit 2-13. Adequacy of Preparation by RN Program:
Caring for Acutely Ill Patients**



**Exhibit 2-14. Adequacy of Preparation by RN Program:
Administrative/Supervisory Skills**

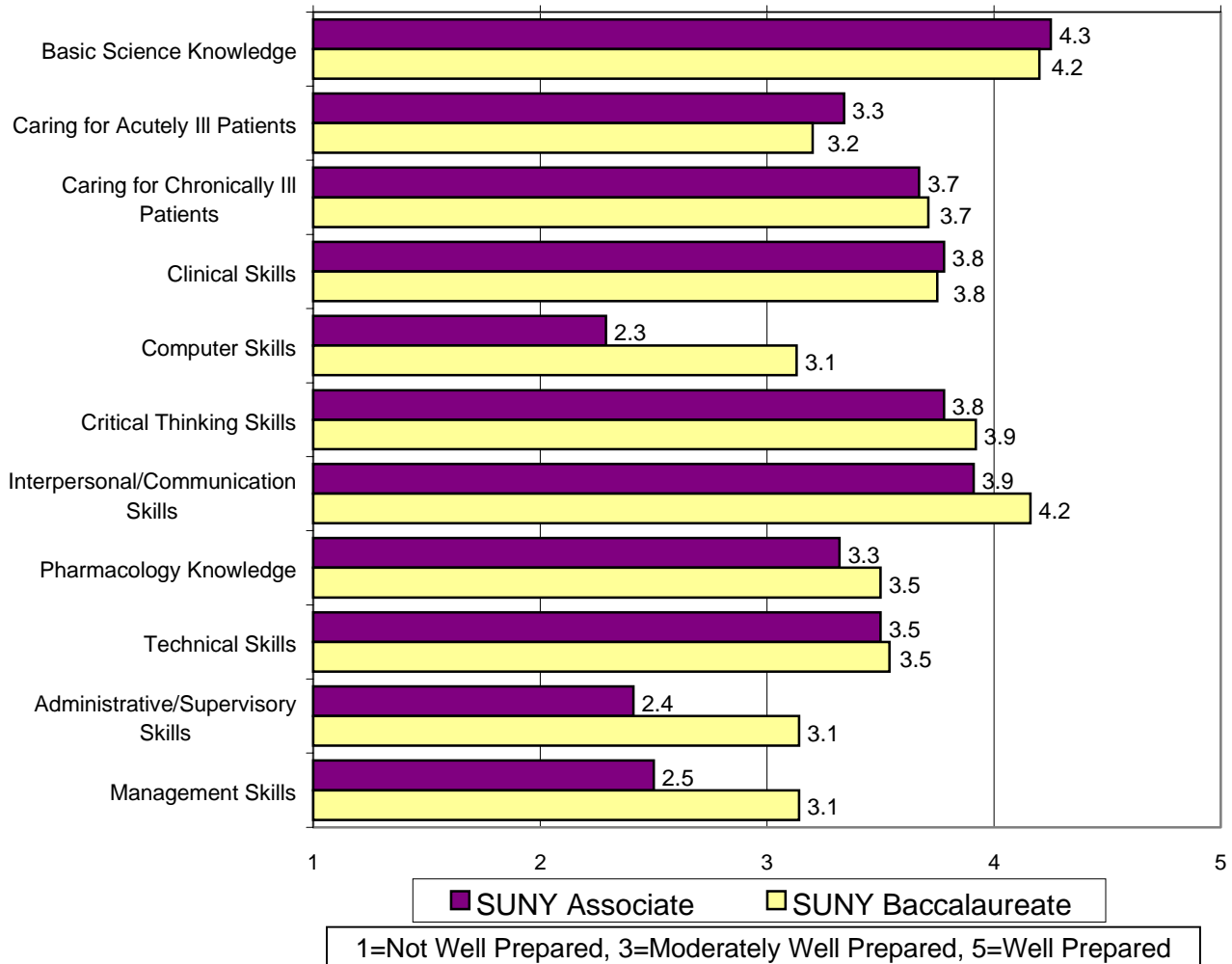


**Exhibit 2-15. Adequacy of Preparation by RN Program:
Management Skills**



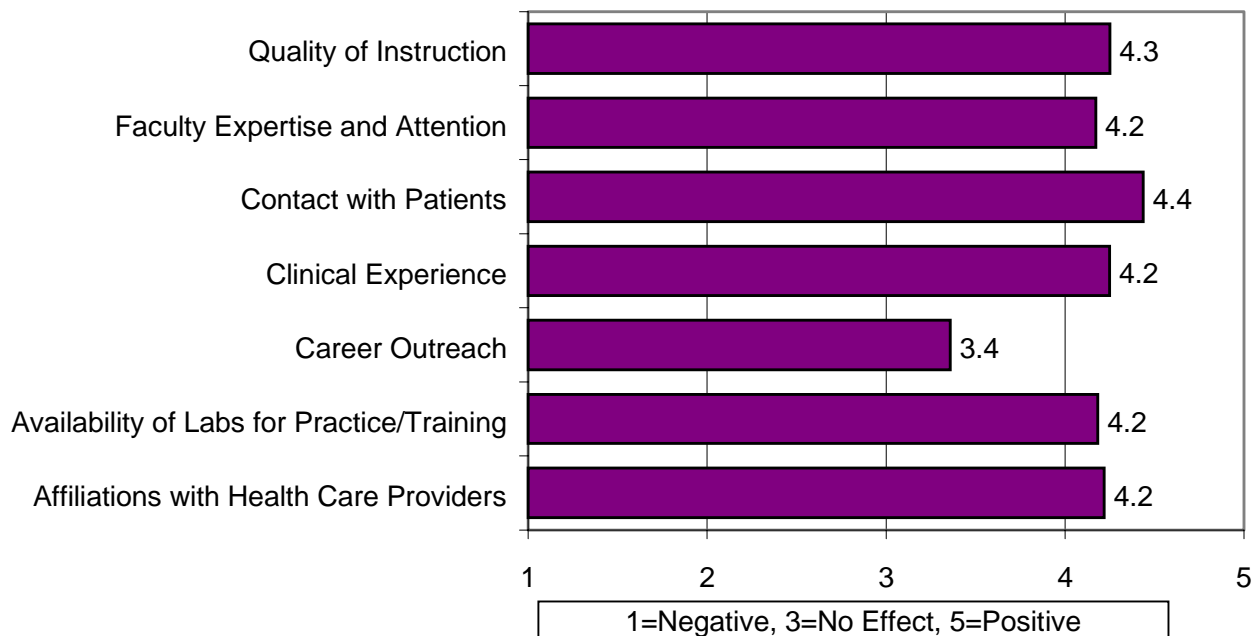
Associate degree RNs responded that they were as well prepared as baccalaureate degree RNs (within SUNY) with the marked exception of computer skills, management skills, administrative/supervisory skills. The responses are shown graphically in Exhibit 2-16.

**Exhibit 2-16 . Adequacy of Preparation
of Recently Licensed RNs in NYS Prepared by SUNY**



Survey recipients were also asked to rate seven RN program characteristics regarding the effect they felt it had on their educational experience. Again, responses are given in the aggregate, as there were virtually no differences across educational levels and sectors. Exhibit 2-17 shows that programs scored high on almost all program characteristics. One notable exception is for career/outreach resources, which scored considerably lower than other characteristics. This is particularly important when viewed in combination with respondent comments that they had a difficult time getting a job in the *setting that they desired*. Most respondents were indeed employed in an RN position, but many complained that they were turned away from positions because they did not have adequate experience or did not know the right people. RN programs may benefit from enhancing their career outreach and placement services.

**Exhibit 2-17. Recently Licensed RNs in NYS:
Effect of RN Program Characteristics on Educational Experience**



Practice Characteristics

Approximately 95% of recently licensed RNs who responded to this survey were employed in positions requiring an RN license. As can be seen in Exhibit 2-18, most respondents were employed in only one RN position. However, between 7% and 19% were employed in two or more RN positions. Associate degree RNs are approximately 10% more likely to work in multiple jobs than baccalaureate degree RNs.

Exhibit 2-19 shows differences in practice settings for associate degree and bachelors degree nurses. Bachelors degree nurses are more likely to work in a hospital setting (77.5%) than associate degree nurses (54.9%), while associate degree nurses are more than 10% more likely to work in nursing homes or extended care facilities than bacallaureate degree nurses.

**Exhibit 2-18. Recently Licensed RNS:
% Employed in 2 or More Positions**

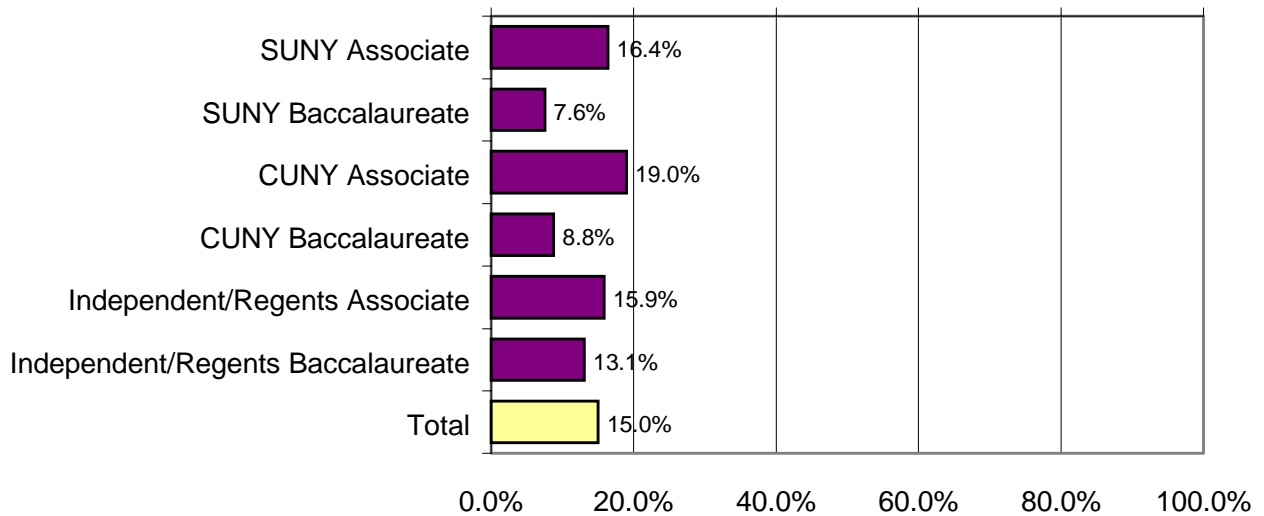
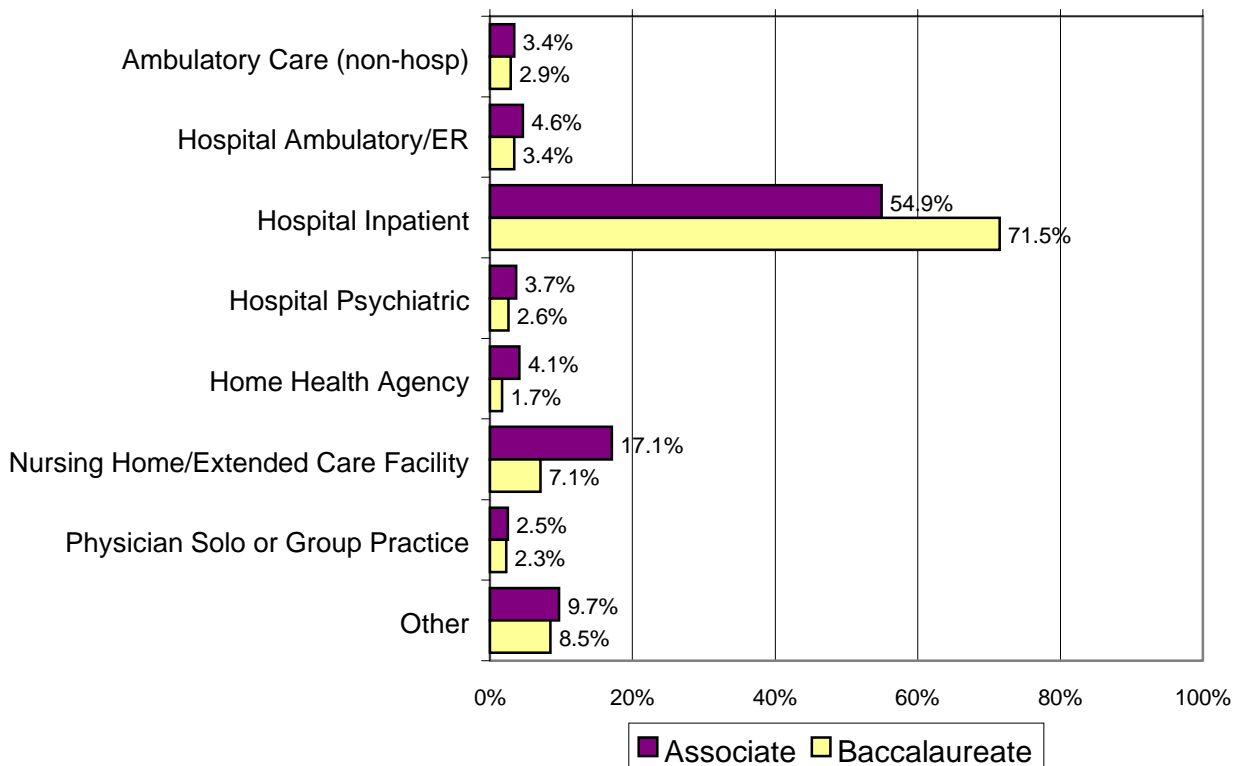
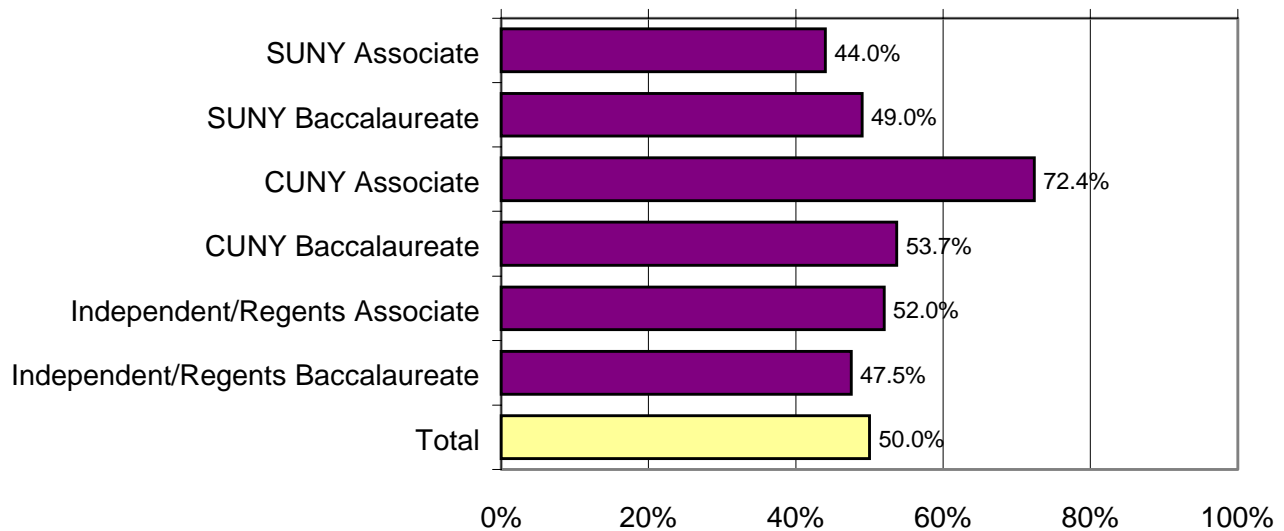


Exhibit 2-19. Practice Setting by Educational Level



Half of all recently licensed RNs had difficulty finding a position they were satisfied with. Exhibit 2-20 shows that this was particularly true for CUNY associate degree graduates, three-quarters of whom indicated difficulty in finding a satisfactory position. This suggests that the job market for associate degree graduates is tighter in New York City than upstate. The SUNY sector was the only one in which baccalaureate degree graduates had a more difficult time finding a position than associate degree graduates.

**Exhibit 2-20. Difficulty Finding a Satisfactory RN Position:
Recently Licensed RNs in NYS**



Just over one-quarter of recently licensed RNs had to change their job plans because of limited opportunities. Exhibit 2-21 shows that CUNY associate degree graduates were the most likely to have done this, again supporting the conclusion that the job market for associate degree RNs is tight in New York City. While one-quarter may seem high, it is still true that 95% of recently licensed were employed as RNs at the time that they completed the survey. This suggests that, while new RNs are able to find nursing positions, they may have difficulty finding positions in the settings or facilities of their choice.

The average annual nursing salary for recently licensed RNs in New York State was \$36,570. Exhibit 2-22 shows that salaries were markedly higher for baccalaureate degree graduates than for associate degree graduates. However, when other factors were controlled for, such as geographic region and practice setting, salaries for associate and bachelors degree nurses were much closer. Baccalaureate degree RNs are more likely to work in hospitals, which pay more than other settings. They are also more likely to work in New York City, which, as is reflected by CUNY salaries, clearly pays more than other regions of the state.

Exhibit 2-21. Percentage of Respondents Having to Change Job Plans Because of Limited Opportunities

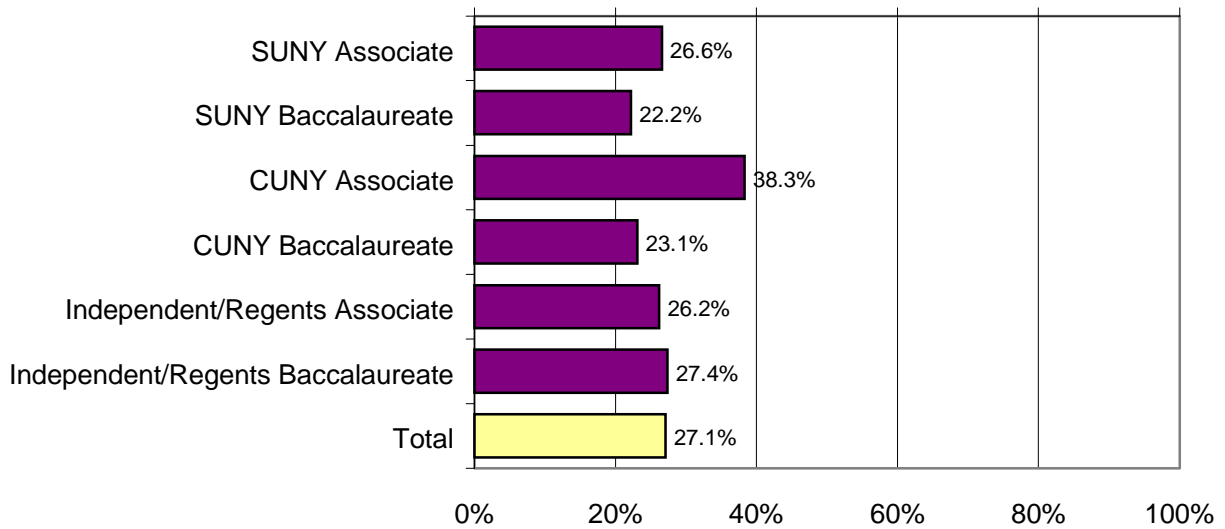
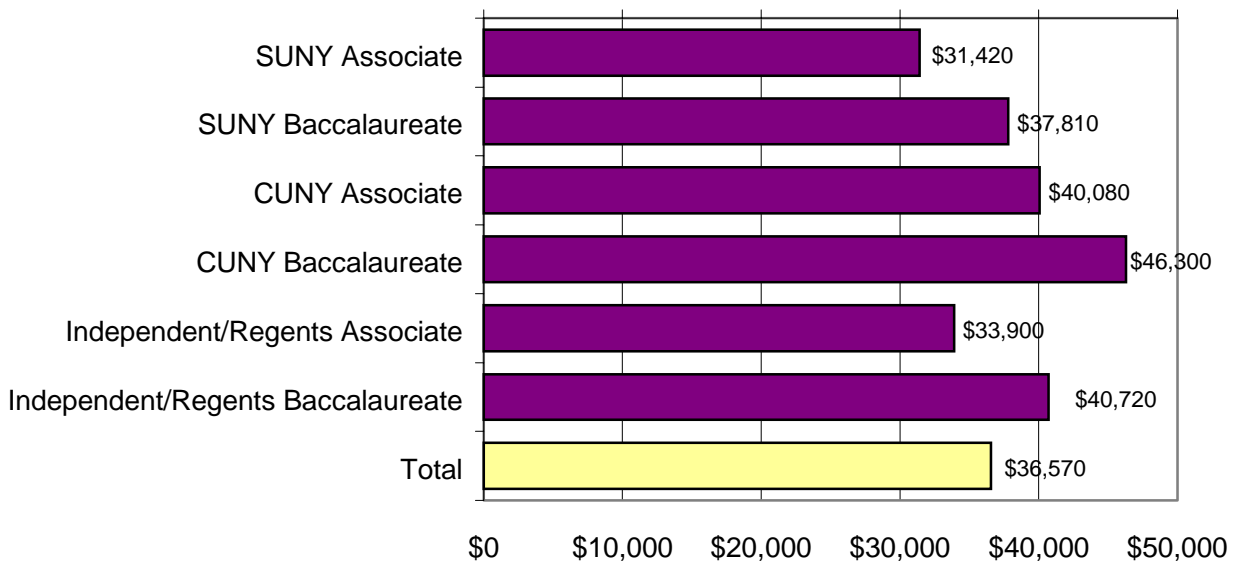
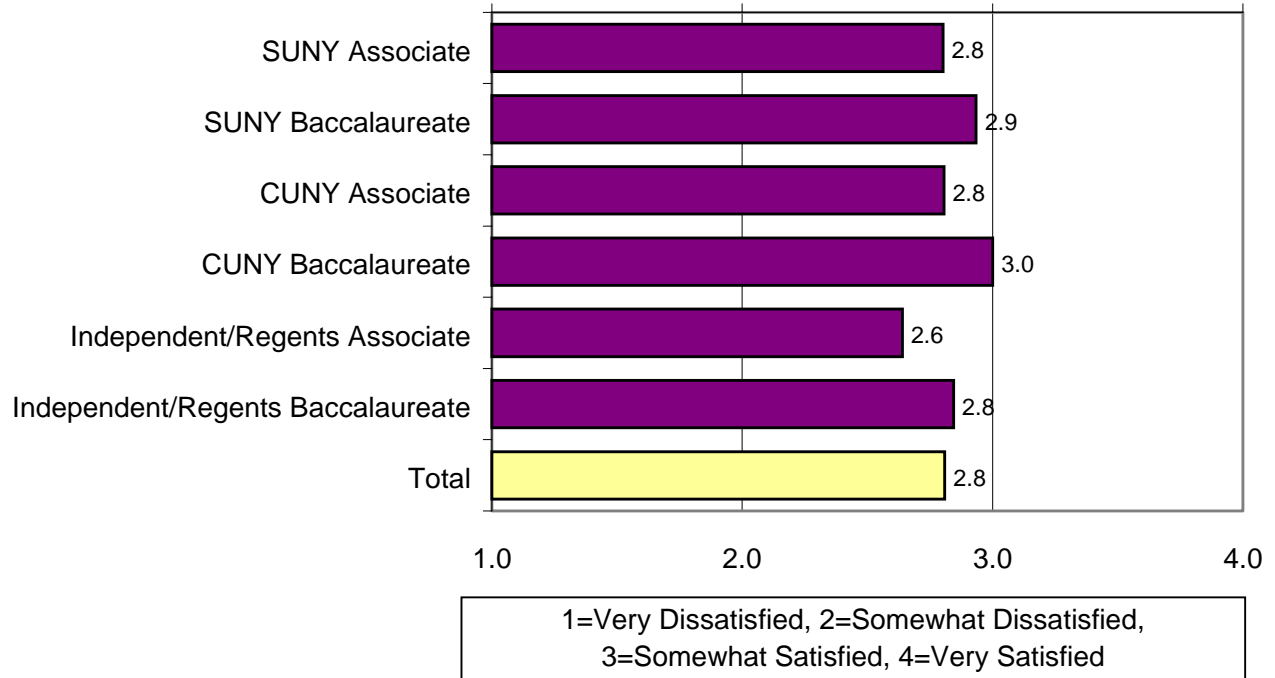


Exhibit 2-22. Average Annual Nursing Salary of Recently Licensed RNs in NYS by Educational Level and Sector



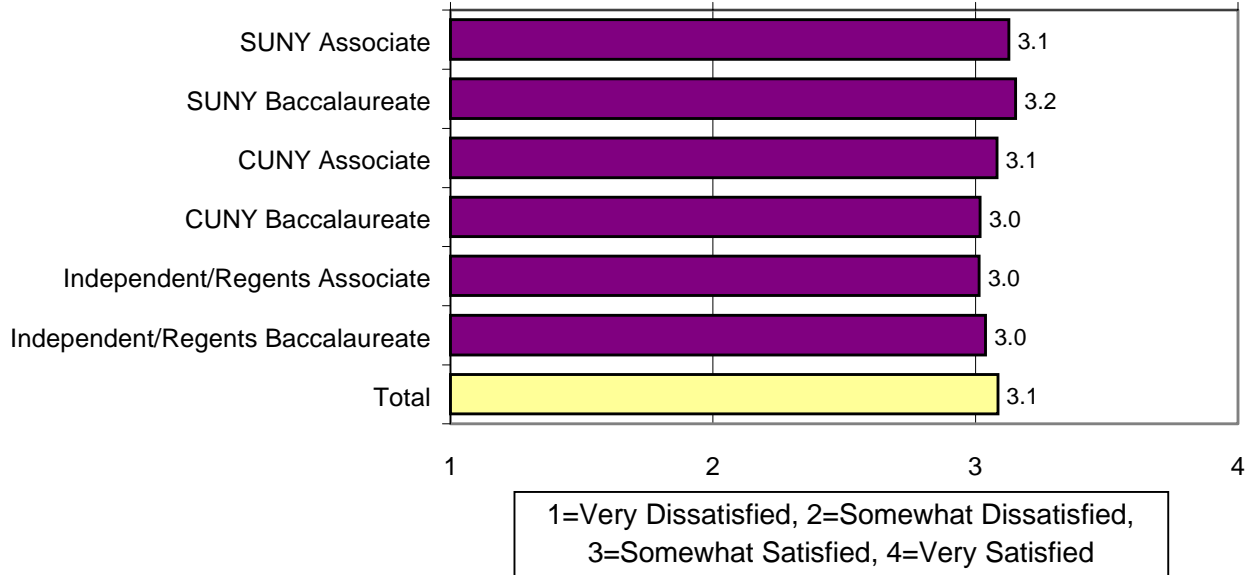
Satisfaction with salaries is summarized in Exhibit 2-23. Not surprisingly, recently licensed RNs with higher salaries (baccalaureate degree RNs) are slightly more satisfied with their salaries than associate degree graduates, but all categories fall in the “somewhat satisfied” range.

Exhibit 2-23. Satisfaction with Salary of Recently Licensed RNs in NYS by Educational Level and Sector



Most survey respondent reported being somewhat to very satisfied with their principal practice position. Exhibit 2-24 shows that variations across educational levels and sectors are minimal.

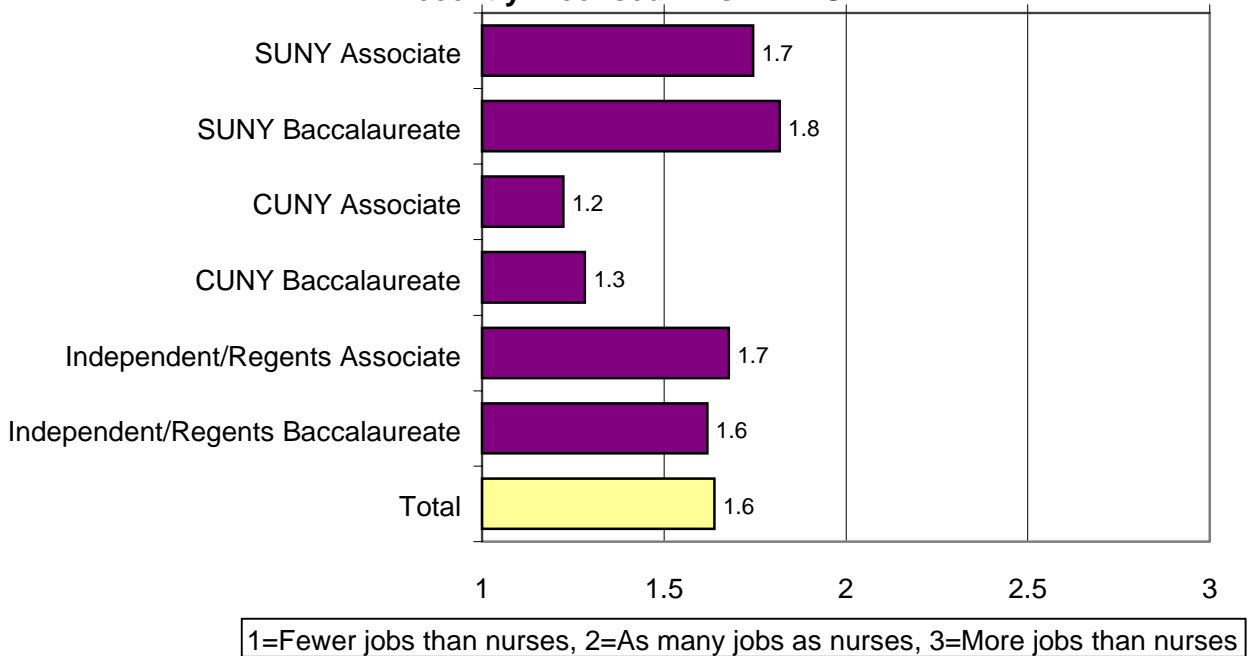
Exhibit 2-24. Satisfaction with Principal Position: Recently Licensed RNs in NYS by Educational Level and Sector



Assessment of Job Market

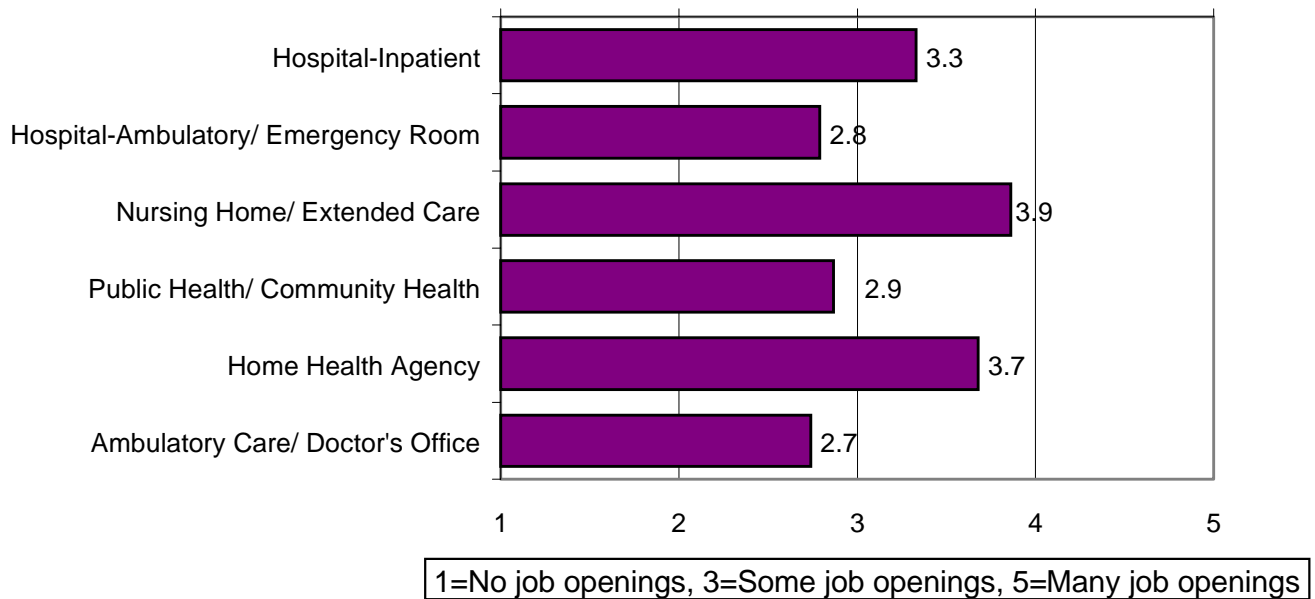
Recently licensed RNs have a relatively negative view of the job market. The average rating, summarized in Exhibit 2-25, was that there were slightly fewer jobs than nurses. Baccalaureate degree RNs were slightly more likely to have a more positive view of the job market, and CUNY graduates had a notably more negative view of the job market.

**Exhibit 2-25. Overall Assessment of the Job Market
Recently Licensed RNs in NYS**



As can be seen in Exhibit 2-26, there were significant differences in assessments of the job market in different settings. Nursing homes/extended care facilities and home health agencies were rated as having the most job openings, while ambulatory care/doctor's offices, hospital ambulatory units/emergency room and public health/community health settings were rated as having the least. Hospital inpatient units fell in between.

**Exhibit 2-26. Recently Licensed RNs:
Assessment of Job Market by Setting**



Chapter 3

CHARACTERISTICS AND EMPLOYMENT EXPERIENCES OF GRADUATES OF BSN COMPLETION PROGRAMS IN NEW YORK STATE

An important component of the nursing education system is the set of programs that permit associate-trained RNs to extend their education to the baccalaureate level. Although these programs do not add to the number of RNs in the workforce (since participants are already trained as RNs), they are an important element in the larger system of providing opportunities for interested and qualified nurses to advance in their chosen profession.

These so-called BSN Completion programs are not well understood, partly because their graduates are typically mixed together with graduates of regular four-year BSN programs, but mostly because few studies have been done of them. The *1999 Survey of Recent Graduates of Baccalaureate Completion Programs in Nursing in New York State* conducted as part of this study was designed to fill this information void by collecting information from associate-trained RNs who completed a baccalaureate program in nursing in 1998 at a SUNY campus. The survey, a copy of which is included in Appendix C, covered the following topics:

- Demographic Characteristics: Gender, age, citizenship status, race/ethnicity, presence of minor children in the home, and current employment status.
- Education and Training: Location of basic nursing education program, year basic nursing education was completed, whether it was part of the SUNY system and additional nursing and non-nursing education completed, # of years of RN experience before BSN completion program, and setting worked in before BSN completion program.
- Impact of Baccalaureate Degree: Reason for obtaining BSN, employment changes experienced as a result of earning BSN, tuition reimbursement information, and whether respondent worked as RN while earning BSN.
- Current Employment: Number of positions employed as RN, principal and secondary practice setting, percent of time spent in direct patient care, practice zip code, hours per week and weeks per year worked as an RN, principal job activity, primary patient population, # months employed as RN in NYS, shifts worked, expectations for remaining with current employer, job and salary satisfaction, annual RN salary, change in RN salary after earning

BSN, reasons for choosing current position and conditions under which respondents are willing to work additional hours.

- Most Recent Job Search Experience: Difficulty finding a position, # months to find a position, total # of positions applied for and total # number of job offers.
- Impression of Job Market for RNs: Geographical area for which respondent is most familiar with the job market, assessment of job market by setting and overall assessment of job market for RNs with and without BSNs.
- Curriculum: Adequacy of preparation in several areas by basic nursing program, effect of basic nursing program characteristics on educational experience.

Surveying recently licensed RNs gives a snapshot of the job market for those with little or no RN experience. It also allows us to examine the contributions made by educational level and sector and by geographic region to the supply of RNs in New York State.

Methodology

In September, 1999 the Center for Health Workforce Studies (CHWS) began conducting the *1999 Survey of Recent Graduates of Baccalaureate Completion Programs in Nursing in New York State*. Lists of 1998 graduates of BSN completion programs were obtained from 7 of the 9 SUNY BSN completion programs (Brooklyn, Syracuse, Stony Brook, Binghamton, Brockport, New Paltz and Plattsburgh. Buffalo and Utica-Rome did not supply their graduate lists). There were 294 individuals on this list, of which 280 had valid mailing addresses and were living and residing in either the U.S. or Canada. The survey was sent to this entire group. A total of 173 RNs (61.8%) responded to the survey over two mailings: The first, conducted in late September of 1999, yielded a response rate of 40.0% (n=112); and the second mailing, conducted in October, 1999, yielded a response rate of 21.8% (n=61).

Each survey packet included a cover letter from CHWS, a 4-page survey, a coding sheet (with codes for a question asking what nursing program they attended), a business reply envelope with which to return the survey, and an incentive business-reply postcard wherein respondents could request a summary of the study results. For each mailing, there was a 3 week deadline within which recipients were asked to respond.

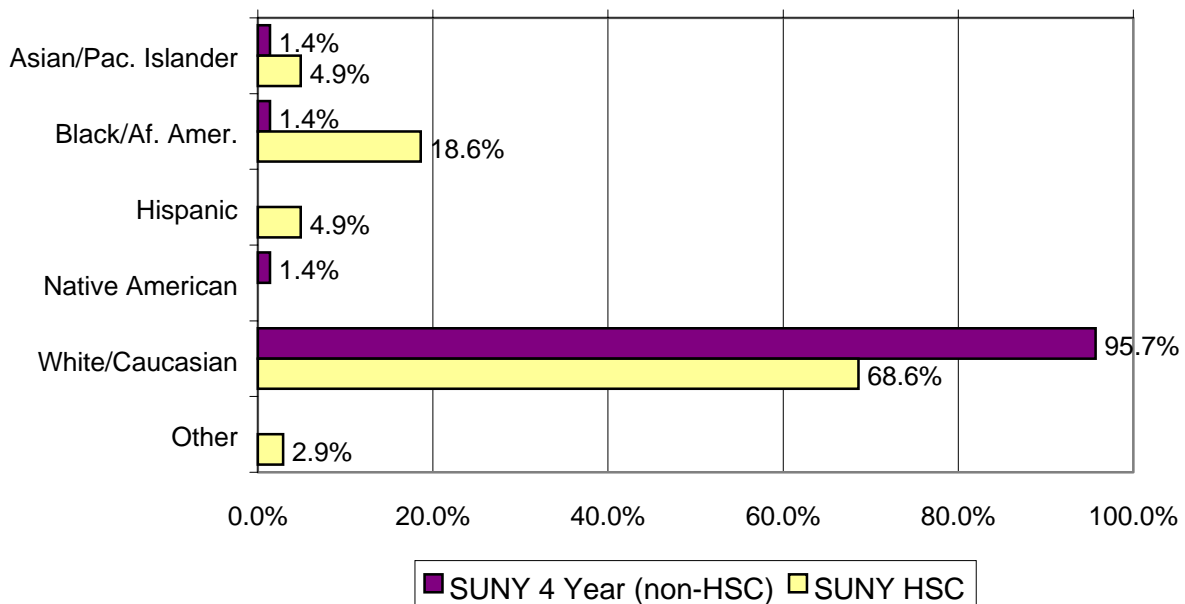
This chapter will present only those findings that were thought to meaningfully add to the picture of RN workforce in New York State over and above the findings from the *1999 Survey of Recently Licensed Registered Nurses in New York State*. Not all survey results will be presented.

Demographic Characteristics

For the purposes of this analysis, any SUNY BSN program located in a school that contained a medical school and hospital was deemed a health science center (HSC). This includes Brooklyn, Syracuse, and Stony Brook. Binghamton, Brockport, Plattsburgh and New Paltz were assigned to the SUNY 4-year (non-HSC) category.

The HSCs were more likely to enroll under-represented minorities than the non-HSCs. This may be a reflection of the geographical location of two of the HSCs (Long Island and NYC).

Exhibit 3-1. BSN Completers: Racial Ethnic Category by SUNY Institutional Type



BSN completers are approximately 11 years older than new BSNs, and more than twice as many BSN completers have children than do new BSNs (Exhibit 3-2). When this finding is viewed in conjunction with the fact that BSN completers have an average of 8.3 years of RN work experience, the age and child disparity is logical. This is consistent with the finding of the recently licensed RNs (in the previous chapter) which shows that associate degree RNs are older

and more likely to have children than new BSNs; and these are precisely the people going on to complete their baccalaureate degree.

Exhibit 3-2. Age and Children of BSN Completers and New BSNs

	BSN Completers	New BSNs
Average Age	39.1 Years	28.3 Years
Minor children living at home	51.0%	23.4%

Educational Characteristics

BSN completers report going back to school for a number of reasons. Below is a chart of the reasons they report returning to school and the actual experience after earning the BSN. The largest motivating force for completing the baccalaureate degree was career advancement. While not many RNs reported getting a promotion after earning a BSN, career advancement is generally seen as a long term goal, not to be realized in just one year after graduation. More RNs received pay increases as a result of earning their baccalaureate degree than expected to. Just over one-third of RNs expected and reported gaining greater skills after earning the BSN. While this number may seem low, the average respondent had been working for over 8 years before returning to school. Many probably felt their nursing skills were adequate, and thus did not see this is the primary motivating factor for returning to school.

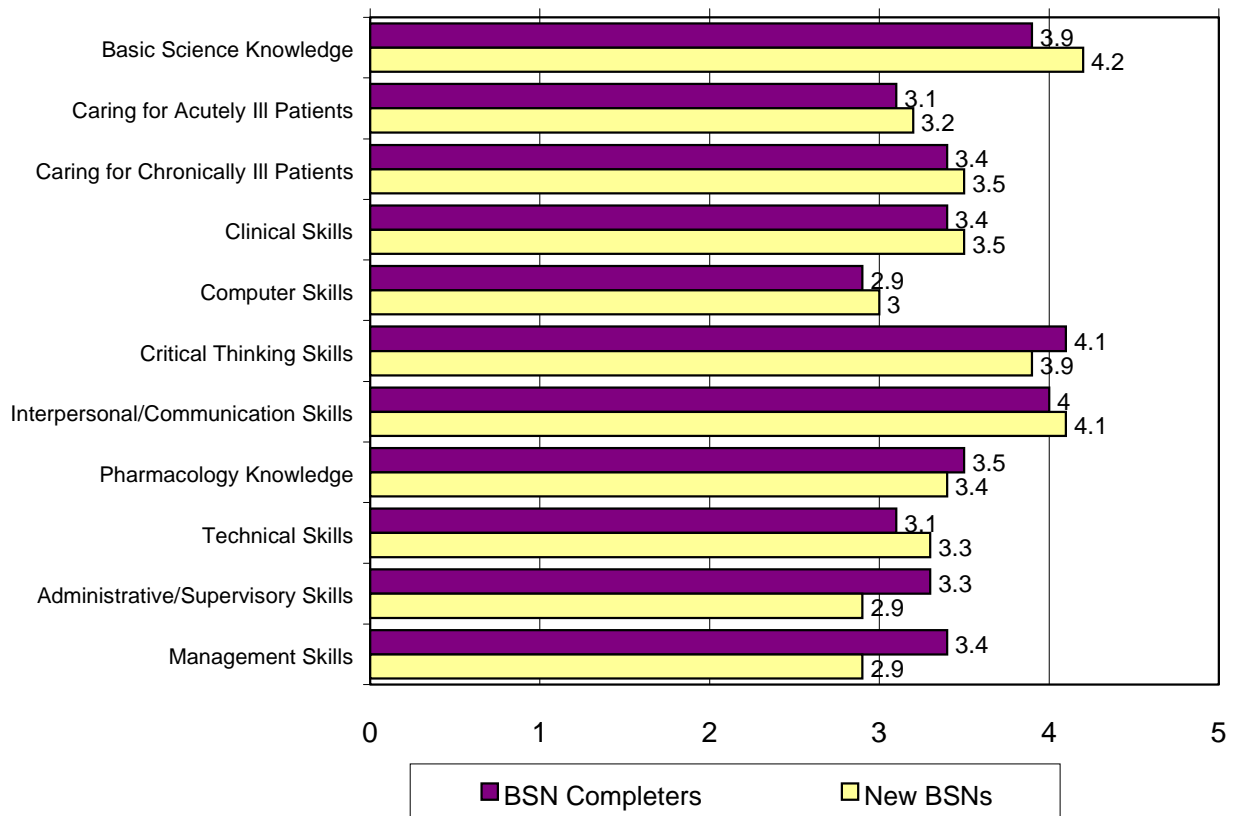
Exhibit 3-3. Reason for Obtaining BSN and Experience After Earning BSN

	Reason for Obtaining BSN	Experienced After Earning BSN
Higher Pay	33.5%	45.1%
Career Advancement	74.0%	16.2%
Gain Improved Skills	38.7%	35.3%
Change to Non-Patient Care Nursing	13.3%	4.6%

Eighty-two percent of respondents worked as RNs while they attended their BSN completion program. Fifty-four percent of BSN completers received tuition reimbursement; and 49% of those reimbursed were by the employer for whom they worked while they were in their BSN program. Less than one percent received tuition reimbursement/scholarship monies from the school that they attended.

Respondents were asked to rate their BSN programs regarding how well they felt they were prepared in a variety of areas. Exhibit 3-4 shows that the highest scores were for critical thinking skills, interpersonal/communication skills, and basic science knowledge. While scores on administrative/supervisory skills and management skills were relatively low, they were substantially higher than the ratings given by new BSNs.

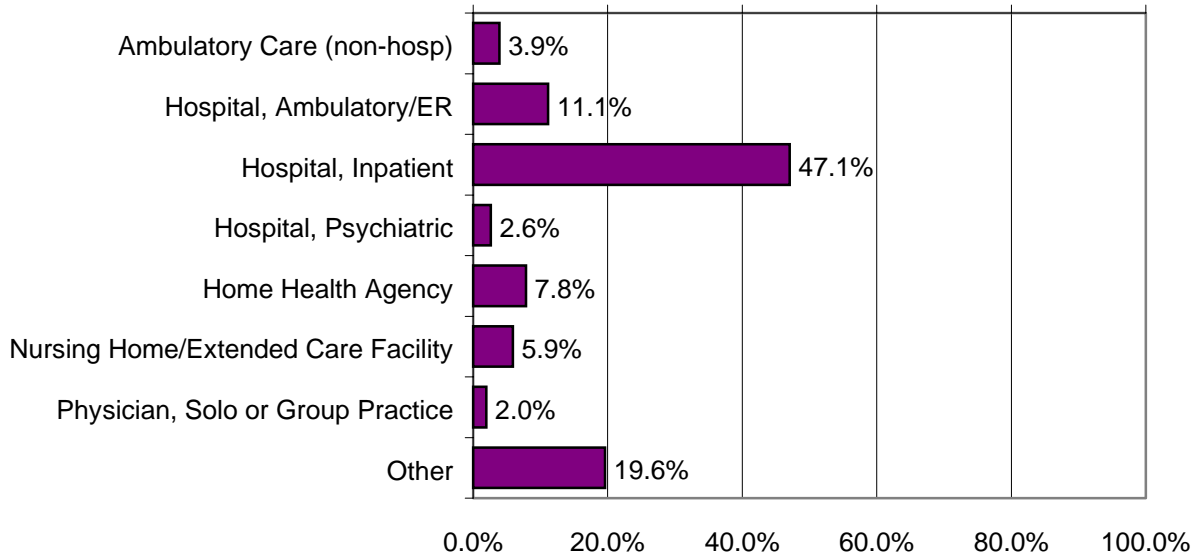
Exhibit 3-4. Adequacy of Preparation: BSN Completers and New BSNs



Practice Setting

Over half of BSN completers work in a hospital setting, with the next largest group being in home health agencies. While it is clear that hospitals dominate the settings that BSN completers choose to work in (60.8%), new BSNs are even more likely to work in hospitals (77.5%).

Exhibit 3-5. BSN Completers by Practice Setting



Job Market Indicators

Forty-three percent of the sample searched for a new job after earning their baccalaureate degree. Of those, 41.3% indicated difficulty in finding a position they were satisfied with. The reasons for these difficulties were varied: 17.3% reported a lack of opportunities in their desired practice setting, 16.0% reported that inadequate salary was offered, 14.7% reported a lack of opportunities for RNs at their educational level, another 14.7% reported a lack of opportunities during the desired shifts, 12% reported a lack of opportunities in the desired location, 8% reported poor career resources at their school and 4% reported family needs or constraints as getting in the way of taking the desired job.

Respondents indicated that they were, on average, somewhat satisfied with their principal position and between somewhat dissatisfied and somewhat satisfied with their salary from their principal position.

Chapter 4

NURSING WORKFORCE IN NEW YORK STATE REGIONS

With 103 undergraduate programs graduating more than 5,500 RNs annually, New York has a significant capacity to produce new nurses to serve the health care needs of its citizens. The map in Exhibit ES-6 [page ES-12] shows that this educational capacity is distributed broadly across the state, both geographically and across educational institution sectors.

As is true in many similar situations, there are a number of different strategies that can be pursued to address the nursing workforce goals of the state. At one extreme, one can focus only on statewide workforce objectives; and at the other extreme, one can focus on each of the 103 separate nursing education programs. Neither of these extremes deals effectively with two important issues: distribution and efficiency.

REGIONAL PLANNING

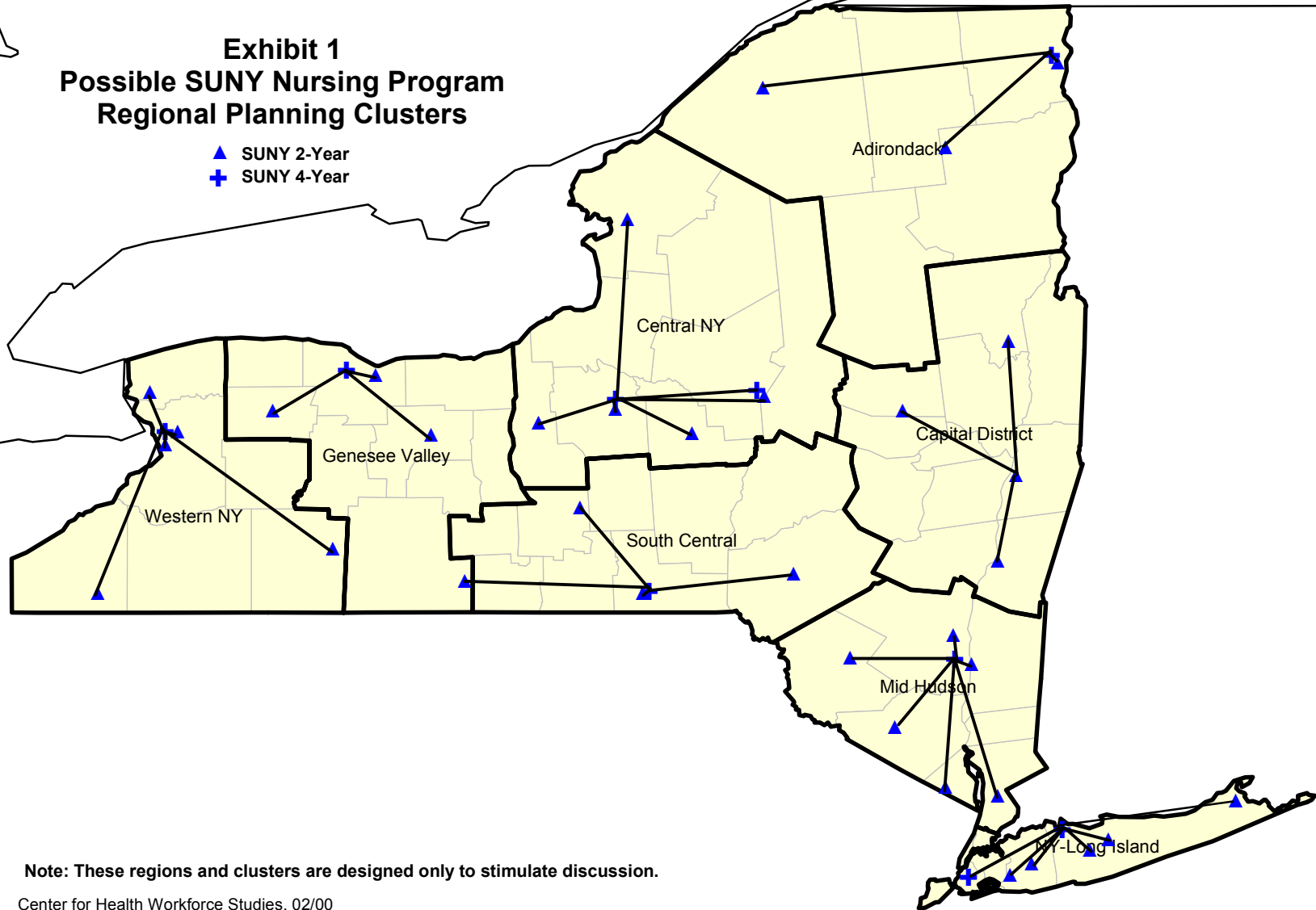
One option that offers some promise focuses on substate regions. This strategy recognizes that in a state as large as New York the nursing workforce and the nursing education programs in different parts of the state interact very little. This means that matching nursing workforce needs and the production of new nurses requires regional coordination and planning. It also recognizes that regions as small as counties are also not appropriate because both nursing employment and nursing education tend to concentrate in larger more urban counties such that self-sufficiency for all counties is not possible.

Effective regional planning requires several components, including: definitions of regions that encompass both nursing employers and nursing education programs; agreement among stakeholders to cooperate rather than compete; timely and accurate data collection; and criteria for assessing the adequacy of the workforce. Not all of these components are currently available in New York State, but there are the beginnings of each:

- The map in Exhibit 4-1 suggests one possible set of regions on which to base regional nursing workforce planning, although further study may reveal others that are more appropriate.
- Although most nursing employers and nursing education programs are on good speaking terms, mechanisms to promote or support coordinated action are generally rudimentary.

Exhibit 1 Possible SUNY Nursing Program Regional Planning Clusters

- ▲ SUNY 2-Year
- ⊕ SUNY 4-Year



Note: These regions and clusters are designed only to stimulate discussion.

Center for Health Workforce Studies, 02/00

- Existing data collection appears to be sound, but the delays in editing and publishing the data undercut efforts to use the data for systematic planning.
- Although a number of criteria can be identified that support nursing workforce planning, there is not a comprehensive set of criteria supported by careful research and evaluation.

The remainder of this chapter presents a variety of data from existing sources, especially the newly licensed RN survey, that suggests how a regional planning effort might be developed. The chapter shows that the various data sets compiled as part of this study do help both to identify problem areas and to frame solution strategies.

REGIONAL ANALYSIS

The numbers of undergraduate nursing awards in New York State in the eight Regents Regions are shown in Exhibit 4-2. The figures show that between 1995-96 and 1998-99 the numbers of awards declined by 21.4%. The largest declines were in the Northern NY and New York City regions (50% and 28%, respectively), with the Regents program showing a 10% increase.

**Exhibit 4-2. Nursing Program Awards in New York State
By Regents Region, 1990-91 to 2000-01**

Regents Region	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	% Change '95-6 - '98-9
Western NY	760	819	848	892	947	890	902	913	731	643	616	-18.1%
Genesee Valley	576	661	586	656	642	654	632	549	511	502	462	-22.0%
Central NY	566	625	624	690	721	799	659	623	607	622	621	-24.3%
Northern NY	83	131	86	92	99	93	99	62	46	56	39	-50.5%
Northeastern NY	699	848	893	954	844	802	792	806	674	654	652	-16.1%
Mid-Hudson	721	863	948	1,021	1,060	1,038	950	907	919	858	871	-11.7%
New York City	1697	1733	1793	1958	2209	2288	1981	1698	1644	1560	1512	-28.3%
Long Island	729	822	900	898	973	937	888	845	703	760	776	-25.2%
Regents	113	122	136	133	159	195	207	209	216	222	219	10.3%
TOTAL	5,944	6,624	6,814	7,294	7,654	7,696	7,110	6,614	6,050	5,877	5,768	-21.4%

Sources: IPEDS, NCES; Center for Health Workforce Studies

Exhibits 4-3 and 4-4 show the variations in the numbers of RN awards by institutional sector and award type across the eight Regents Regions in state. Exhibit 4-3 shows the percentages of the three award types by region, with a separate category for the Regents programs. The chart shows that the nursing education programs in Northern NY, Western NY, and the Regents programs are dominated by Associate degree programs. The chart also reveals that the Long Island region had significantly higher proportion of bachelors degree awards than the other regions.

**Exhibit 4.3. Undergraduate Nursing Program Awards in New York State
By Award Type and Regents Region, 1996-97**

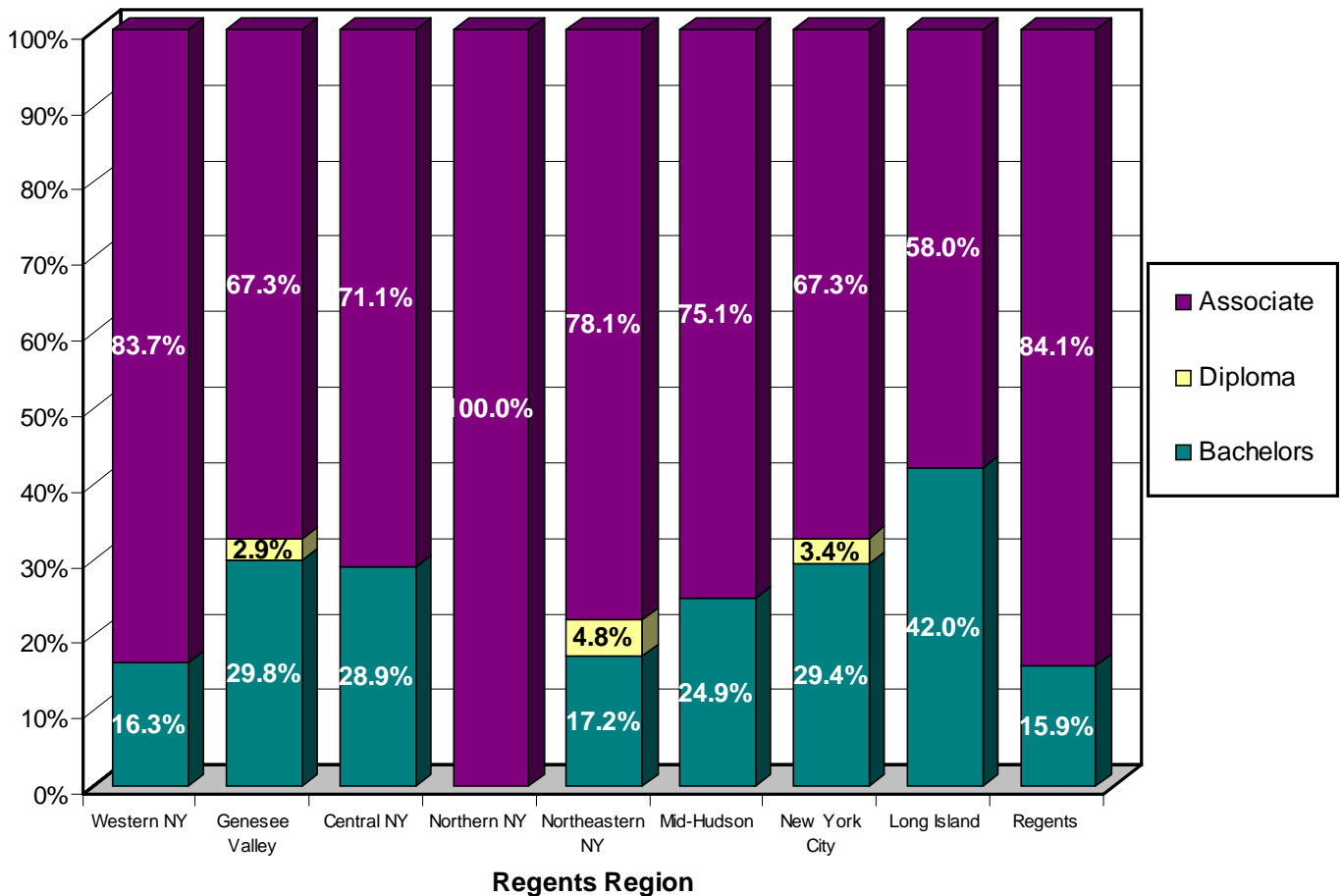
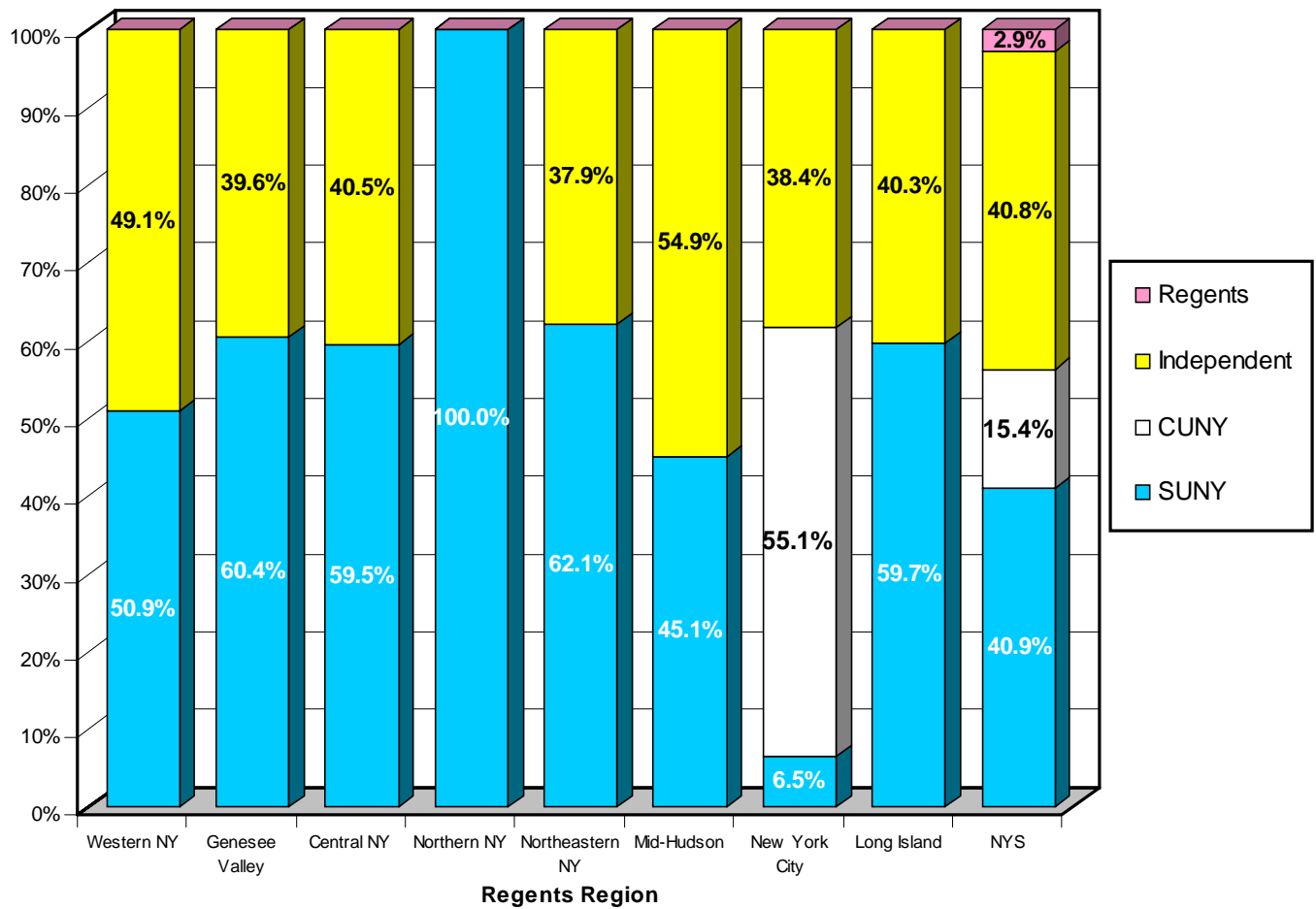


Exhibit 4-4 shows that except in New York City where CUNY is a major presence, and in the New York- Pennsylvania region where only SUNY has nursing education programs, the State University and the independent colleges both have significant market shares. The awards by the Regents External Degree Program are not shown in this Exhibit because it is not possible to determine the region from which the Regents program graduates came.

These data by themselves provide little guidance to policy makers recommending how many new nurses to educate either statewide or in the eight regions. Additional insights are provided in the responses to the survey of newly licensed nurses and the survey of the nursing school deans.

**Exhibit 4.4. Undergraduate Nursing Program Awards in New York State
By Institutional Sector and Region, 1996-97**



Job Market Experiences of Newly Licensed Nurses

One source of additional insights about the job market is the survey of newly licensed nurses. In this survey, respondents answered questions about their job search experiences, including whether they had “a difficult time finding an RN position [they] were satisfied with” and whether they had to “change [their] employment plans because of limited RN opportunities”. The precise wording of the questionnaire can be seen in Appendix A.

The responses to these two questions are summarized in Exhibits 4-5 and 4-6, respectively. Exhibit 4-5 shows significant regional variations in the percentages of newly licensed RNs who had difficulty finding a satisfactory RN position, ranging from 71% in Western New York to 27% in the Genesee Valley region. Although these variations do not definitively confirm a surplus or shortage of RNs, they certainly suggest that the job market is significantly worse in Western New York than in neighboring Genesee Valley. The figures for New York City and Long Island also suggest a relatively tight job market.

These conclusion are supported by the data in Exhibit 4-6, which shows that 36% of recently licensed nurses from Western New York had to change their employment plans, compared with 16% of those in the Genesee Valley. Here, too, New York City and Long Island had relatively high change rates suggesting a relatively tight job market.

These same conclusions are also borne out in Exhibit 4-7 which shows the average number of months required “to find a position as an RN”. In this case New York City and Long Island required somewhat longer times than Western New York, but all three still required greater lengths of time compared to other regions. The Genesee Valley and Central New York regions required the shortest lengths of time.

**Exhibit 4-5. Percentages and Numbers of Newly Licensed Nurses Who Had Difficulty Finding a Suitable Position
By Region in New York State, 1998 Nursing Program Graduates**

Region*	SUNY Assoc		SUNY Bach		CUNY Assoc		CUNY Bach		Indep Assoc		Indep Bach		Other		Total	
Western NY	66.1%	37	66.7%	6	n/a	0	n/a	0	78.6%	33	63.2%	12	85.7%	6	70.7%	94
Genesee Valley	16.9%	10	33.3%	5	n/a	0	n/a	0	20.0%	1	39.1%	9	41.2%	7	26.9%	32
Central NY	24.6%	14	30.8%	4	n/a	0	n/a	0	27.3%	6	41.7%	10	22.2%	2	28.8%	36
Northern NY	31.3%	5	n/a	0	n/a	0	n/a	0	n/a	0	n/a	0	n/a	0	29.4%	5
Northeastern NY	39.7%	31	46.2%	6	n/a	0	n/a	0	30.2%	13	30.8%	4	18.2%	2	35.4%	56
Mid-Hudson	43.6%	44	28.6%	2	33.3%	1	n/a	0	59.3%	16	32.8%	20	46.7%	7	42.1%	90
New York City	45.5%	5	70.0%	14	72.7%	117	53.8%	28	58.9%	33	53.0%	70	50.5%	48	59.8%	315
Long Island	52.8%	75	52.4%	11	80.0%	8	50.0%	1	37.5%	3	53.1%	43	46.2%	12	52.8%	153
Total	42.5%	221	49.0%	48	72.4%	126	53.7%	29	51.7%	105	47.5%	168	46.7%	84	49.3%	781

*Based on geographical region (Regents Region) for which respondent is most familiar with the job market

Source: CHWS, Survey of Newly Licensed Nurses, 1999

**Exhibit 4-6. Percentages and Numbers of Newly Licensed Nurses Who Had to Change Employment Plans
By Region in New York State, 1998 Nursing Program Graduates**

Region*	SUNY Assoc		SUNY Bach		CUNY Assoc		CUNY Bach		Indep Assoc		Indep Bach		Other		Total	
Western NY	33.9%	19	30.0%	3	n/a	0	n/a	0	37.5%	15	36.8%	7	42.9%	3	35.6%	47
Genesee Valley	13.1%	8	20.0%	3	n/a	0	n/a	0	0.0%	0	30.4%	7	11.8%	2	16.5%	20
Central NY	19.3%	11	23.1%	3	n/a	0	n/a	0	13.6%	3	13.0%	3	11.1%	1	16.9%	21
Northern NY	29.4%	5	n/a	0	n/a	0	n/a	0	n/a	0	n/a	0	n/a	0	27.8%	5
Northeastern NY	32.5%	26	30.8%	4	n/a	0	n/a	0	17.4%	8	30.8%	4	9.1%	1	26.4%	43
Mid-Hudson	20.8%	21	12.5%	1	0.0%	0	n/a	0	32.1%	9	21.3%	13	20.0%	3	21.9%	47
New York City	8.3%	1	20.0%	4	39.5%	64	22.0%	11	28.6%	16	31.1%	41	28.7%	27	31.2%	164
Long Island	33.1%	47	20.0%	4	27.3%	3	50.0%	1	25.0%	2	26.8%	22	30.8%	8	29.9%	87
Total	26.2%	138	22.2%	22	38.3%	67	23.1%	12	25.9%	53	27.4%	97	25.1%	45	27.3%	434

*Based on geographical region (Regents Region) for which respondent is most familiar with the job market

Source: CHWS, Survey of Newly Licensed Nurses, 1999

**Exhibit 4-7. Average Number of Months to Find a Suitable Position in Nursing
By Region, Newly Licensed Nurses in New York State, 1998 Graduates**

Region*	SUNY Assoc	SUNY Bach	CUNY Assoc	CUNY Bach	Indep Assoc	Indep Bach	Other	Total
Western NY	3.3	2.5	n/a	n/a	2.6	3.1	5.9	3.1
Genesee Valley	1.0	1.6	n/a	n/a	0.4	1.3	1.8	1.2
Central NY	1.1	0.9	n/a	n/a	0.9	1.5	0.9	1.1
Northern NY	2.0	n/a	n/a	n/a	n/a	0.0	n/a	1.9
Northeastern NY	1.5	1.3	n/a	n/a	1.3	1.9	1.4	1.5
Mid-Hudson	2.3	2.3	4.3	n/a	2.0	2.1	3.0	2.3
New York City	3.3	4.3	4.8	4.2	3.2	3.0	3.3	3.8
Long Island	3.2	3.2	5.6	2.5	2.1	3.4	2.5	3.3
Total	2.3	2.5	4.9	4.2	2.1	2.7	2.9	2.8

*Based on geographical region (Regents Region) for which respondent is most familiar with the job market

Source: CHWS, Survey of Newly Licensed Nurses, 1999

The data on average salaries of newly licensed RNs shown in Exhibit 4-8 illustrates a couple of important points. First, it shows that the salaries in Western New York are the lowest in the state, another sign of a weak job market in the region. Second, it shows that salaries are highest in New York City and Long Island, despite low rankings on the other questions. Among the possible explanations for this are that the cost of living is sufficiently high that employers are obliged to pay higher salaries to attract new RNs. Perhaps the work expectations or skill requirements are substantially greater in the City, although this has never been corroborated in other studies. This is clearly a sign that RNs are unwilling or unable to migrate to the City to take advantage of the higher salaries.

Exhibits 4-5 to 4-8 also provide breakouts for graduates of different groups of colleges. The differences across institutional sectors are much less consistent than those across regions. Salaries are higher for bachelors-trained than associate-trained RNs, but the other patterns are not as uniform across the institutional types. SUNY is clearly much closer to the Independent sector than it is to CUNY on virtually all the measures.

All these data suggest a weaker job market for RNs in Western New York, New York City, and Long Island. The nursing education programs in these regions should temper their expectations and be thinking about reductions rather than the modest increases suggested by other components of this study.

Future Nursing School Applications Anticipated by Nursing School Deans

Another important consideration in all this is whether, despite all the indications in the data of a need for more RNs, there will be sufficient applicants in the future to generate desired expansion. To gain some insights about this we turn to the survey of nursing school deans, especially the questions about applications and acceptances for 1999-00 and 2000-01. Exhibit 4-9 summarizes the expectations of the deans about future applications and acceptances for their programs. A positive score indicates an increase in applications or acceptances and a negative score indicates a decrease. Scores between 0.25 and -0.25 should probably be counted as "About the Same".

**Exhibit 4-8. Average Salaries of Newly Licensed RNS in New York State
By Region of Practice, 1998 Nursing School Graduates**

Practice Region*	SUNY Assoc	SUNY Bach	CUNY Assoc	CUNY Bach	Indep Assoc	Indep Bach	Other	Total
Western NY	\$26,350	\$20,000	n/a	n/a	\$25,210	\$27,330	\$18,000	\$25,350
Genesee Valley	\$26,030	\$29,250	n/a	n/a	\$30,500	\$27,470	\$28,550	\$27,370
Central NY	\$28,510	\$24,710	n/a	n/a	\$26,040	\$26,760	\$32,000	\$27,700
Northern NY	\$28,000	n/a	n/a	n/a	\$24,000	\$30,000	n/a	\$27,860
Northeastern NY	\$26,190	\$31,570	n/a	n/a	\$26,210	\$27,710	\$23,600	\$26,380
Mid-Hudson	\$31,500	\$43,500	\$31,250	n/a	\$38,070	\$39,440	\$40,460	\$35,150
New York City	\$37,000	\$48,700	\$42,150	\$48,290	\$45,350	\$46,590	\$45,400	\$45,020
Long Island	\$37,330	\$42,870	\$35,500	\$42,000	\$42,500	\$45,730	\$41,170	\$40,310
New York State	\$30,660	\$37,820	\$41,110	\$47,830	\$33,480	\$41,100	\$39,760	\$36,310

*Based on geographical region (Regents Region) in which the respondent currently practices

Source: CHWS, Survey of Newly Licensed Nurses, 1999

**Exhibit 4-9. Anticipated Changes in Nursing Program Applications and Acceptances
Based on Assessments of Nursing School Deans in New York State, 1999**

Region <u>Institutional Sector</u>	<u>Applications</u>		<u>Acceptances</u>	
	<u>1999-00</u>	<u>2000-01</u>	<u>1999-00</u>	<u>2000-01</u>
Western NY	0.00	0.67	0.33	0.50
SUNY Associate (5)	0.33	0.67	0.33	0.67
SUNY Bachelors (1)	0.00	0.00	0.00	0.00
Independent Associate (1)	1.00	1.00	1.00	1.00
Independent Bachelors (2)	-2.00	1.00	0.00	0.00
Genesee Valley	-0.38	0.43	-0.25	0.29
SUNY Associate (4)	0.00	1.00	0.00	1.00
SUNY Bachelors (1)	-1.00	1.00	-1.00	1.00
Independent Bachelors (5)	-0.50	-0.33	-0.25	-0.33
Hospital Diploma (1)	0.00	1.00	0.00	0.00
Central NY	-0.18	0.25	-0.09	0.25
SUNY Associate (6)	-0.50	-0.20	0.00	0.00
SUNY Bachelors (2)	0.50	0.00	0.00	0.00
Independent Bachelors (2)	-1.00	1.00	-1.00	1.00
Hospital Associate (1)	2.00	2.00	1.00	1.00
Northern NY	-0.50	0.00	-0.50	0.00
SUNY Associate (2)	-0.50	0.00	-0.50	0.00
Northeastern NY	-0.21	0.17	-0.21	0.25
SUNY Associate (7)	-0.29	0.29	-0.29	0.29
SUNY Bachelors (2)	1.00	1.00	1.00	1.00
Independent Associate (3)	-0.33	0.00	0.00	0.33
Independent Bachelors (1)	-1.00	-1.00	-1.00	-1.00
Hospital Associate (2)	0.00		-0.50	
Mid Hudson	-0.50	0.11	-0.33	0.10
SUNY Associate (6)	-0.20	0.25	-0.20	0.00
SUNY Bachelors (1)	0.00		0.00	0.00
Independent Associate (4)	-1.50	1.00	-1.00	1.00
Independent Bachelors (4)	-0.50	-0.25	-0.25	0.00
New York City	0.11	0.25	0.35	0.57
SUNY Bachelors (1)	0.00	0.00	0.00	0.00
CUNY Associate (7)	0.17	0.33	0.83	0.83
CUNY Bachelors (3)	-0.50	0.00	0.50	0.00
Independent Associate (1)	0.00	0.00	1.00	-1.00
Independent Bachelors (4)	0.25		0.00	0.00
Hospital Associate (4)	0.25	0.33	0.33	0.67
Long Island	-0.17	0.00	-0.67	-0.50
SUNY Associate (4)	0.67	0.00	-0.33	0.00
SUNY Bachelors (1)	-2.00		0.00	
Independent Bachelors (2)	-0.50	0.00	-1.50	-1.00
Regents	0.00	0.00	0.00	0.00
Regents Associate (1)	0.00	0.00	0.00	0.00
Regents Bachelors (1)	0.00	0.00	0.00	0.00

Scores: +2 = Much Higher; +1 = Somewhat Higher; 0 = About the Same; -1 = Somewhat Lower; -2 = Lower
Numbers in parentheses are numbers of Deans responding to the survey questions.

The most significant pattern revealed in Exhibit 4-9 is that the 1999-00 scores are negative for all but New York City and Western New York, while the scores for all regions except Long Island acceptances are positive for 2000-01. Thus the deans are anticipating a continuing decline in the current year, with an increase in the coming year.

Not surprisingly, the patterns across regions and institutional sectors are not consistent. One would expect variations across institutions reflecting changing curricula, different reputations, and different recruiting strategies. The scores for the associate programs do seem somewhat higher than those for bachelors programs, although it not possible to infer any reason for these differences. Additional detail is provided for SUNY nursing programs in Exhibit A-2 in Appendix A.

STEPS TOWARD MORE EFFECTIVE REGIONAL PLANNING

Despite the fact that the data collected and compiled for this project are relevant to regional planning for the nursing workforce, much more is needed for *effective* regional planning and policy making. A number of steps are suggested below that would help to create a more effective regional planning system.

1. **Identification of appropriate “nursing workforce planning regions”.** These regions, which would reflect the needs of a combination of nursing employers, nursing students, and nursing education programs, would provide a focal point for data collection, education program coordination, employer recruiting and staffing programs, and career tracks for nurses. We envision between nine and ten such regions across New York, anchored by major employers and nursing education programs, and separated by distances that are barriers to migration and commuting of nurses.
2. **Improved data collection on the nurse workforce and nursing education programs.** The data should include the kinds of data collected for this study (i.e., the newly licensed RN survey, the nursing school Dean survey). The data should also include annual surveys of nursing employers, especially hospitals, nursing homes, and home care agencies. Ideally, the data will also include periodic sample surveys of all licensed nurses to help define the changing scope and characteristics of the nursing workforce, including patterns of employment, career tracks, age, migration, and retirements. Special attention should be

devoted to sharing the data with interested parties on a timely basis, avoiding the delays that have undermined effective planning in the past.

3. **Development of consortia of nursing education programs.** These consortia should be established to support effective and timely responses to workforce needs of employers in the respective regions. The consortia should agree on appropriate roles for the various member programs so that, when expansion or contraction is required, it is understood which program(s) will add or subtract students. This will be one of the most challenging components of the new system, since it will supplant entrepreneurial spirit with centralized planning.
4. **Develop criteria for identifying nursing shortages and surpluses.** It is not possible with existing data sets to accurately measure the supply of or the demand for nurses in New York. Existing data sets are not up to the task, and the criteria needed for the assessments are not available. This effort will require a substantial research effort with both theoretical and empirical components. A variety of measures must be tried and tested, and validated against the attitudes and opinions of stakeholders in the field.

If all of these steps are taken, it should be possible after a period of a year or two to implement a nursing workforce planning system that will meet the needs of all stakeholder groups: employers, education programs, the population served by nurses and the nurses themselves. If properly guided by advisors representing the various stakeholder groups, the process itself should promote greater understanding of the nature of the problems that must be addressed and the steps that must be taken to solve them.

APPENDIX A

SUNY RN ADVISORY COMMITTEE

SUNY RN Advisory Committee

1. Fulton-Montgomery Community College
2. Jamestown Community College
3. Nassau Community College
4. Rockland Community College
5. Sullivan County Community College
6. SUNY A&T at Morrisville
7. SUNY Binghamton
8. SUNY Buffalo
9. SUNY College at Brockport
10. SUNY College at New Paltz
11. SUNY College at Plattsburgh
12. SUNY Health Science Center, Brooklyn
13. SUNY Health Science Center, Syracuse
14. SUNY Institute of Technology Utica/Rome
15. SUNY Stony Brook
16. SUNY System Administration, Office of Academic Affairs
17. SUNY System Administration, Office of Hospital & Clinical Services

Consultants:

18. New York University
19. SUNY Buffalo

APPENDIX B

1999 Survey of Recently Licenses Registered Nurses in New York State

Marking Instructions

- Use a No. 2 pencil or blue or black ink pen only.
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the oval completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form.

● CORRECT ✗ INCORRECT

1999 Survey of Recently Licensed Registered Nurses in New York State

Center for Health Workforce Studies
School of Public Health, University at Albany
State University of New York

This questionnaire is designed to obtain information on the supply, demand, and distribution of registered nurses in New York State in order to assist the nursing education community in meeting future health care needs. Your response will be anonymous and will be reported only in statewide and regional tabulations and summaries.

Please mark only one answer for each question unless otherwise directed.

A. DEMOGRAPHIC CHARACTERISTICS

- 1.** Gender
 Male
 Female
- 2.** Age
- | | | |
|---|---|---|
| | | |
| ① | ① | ① |
| ② | ② | ② |
| ③ | ③ | ③ |
| ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ |
- 3.** Citizenship Status
 Native Born U.S.
 Naturalized U.S.
 Permanent Resident
 H-1, H-2, H-3 Temporary Worker
 J-1, J-2 Exchange Visitor
 Other
- 4.** Race/Ethnic Category
 Asian or Pacific Islander
 Black/African American (not Hispanic)
 Hispanic/Latino (Puerto Rican)
 Hispanic/Latino (All Other)
 Native American/Alaskan
 White (non Hispanic)
 Other
- 5.** How many minor children do you have living at home?
 Newborn to 6 years: None 1 2 3+
 7–14 years: None 1 2 3+
 15–18 years: None 1 2 3+
- 6.** Are you currently working in a position that requires an RN license?
 Yes No
- 6a.** If no, mark all reasons that apply:
 Family/Personal reasons
 Pursuing additional nursing education
 Pursuing additional non-nursing education
 Working as LPN
 Working in healthcare, but in a non-nursing position
 Working in a non-healthcare position
 Cannot find an RN position
 Other
- 6b.** If not currently in a position that requires an RN license, do you expect to be employed in such a position:
 Within the next 6 months
 Within 7–12 months
 Within 13–24 months
 In 25 months or more
 Do not plan to work in such a position in the future

- 7.** Were you licensed as an RN in another state or country before becoming licensed as an RN in New York?
 Yes No
- 7a.** If yes, how many years did you work as an RN prior to licensure in New York?
 No work as RN 3–4 years
 Less than 1 year 5–9 years
 1–2 years 10+ years

B. EDUCATION AND TRAINING

- 1.** What was the location of the basic nursing education program where you were prepared to take the RN licensing examination?
 New York State Other U.S. State or Territory Foreign Country
- 1a.** If your basic nursing education program was in New York State, was it part of the SUNY system?
 Yes No
- 1b.** If your basic nursing education program is located in New York State, please identify the program using the enclosed coding sheet.
- | | | |
|---|---|---|
| | | |
| ① | ① | ① |
| ② | ② | ② |
| ③ | ③ | ③ |
| ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ |
- 2.** What nursing education have you completed? (Mark all that apply)
 Practical Nursing Program
 RN Diploma Program
 Associate Degree
 Baccalaureate Degree
 Advanced Nursing Degree
 Master's Degree
 Doctoral Degree
- 3.** Do you have any non-nursing degrees? (Mark all that apply)
 I do not have any non-nursing degrees
 Associate Degree
 Baccalaureate Degree
 Master's Degree
 Doctoral Degree
 Other

ONE



PLEASE DO NOT WRITE IN THIS AREA

SERIAL #

4. If you have earned a non-nursing degree(s), did you complete this degree before entering your basic nursing education program that prepared you for RN licensure?
 Yes No

5. Are you currently attending another formal nursing education program?
 No
 Associate Degree Program
 Baccalaureate Degree Program
 Post-Baccalaureate Certificate Program
 Master's Degree Program
 Doctoral Program
 Other

C. CURRENT RN EMPLOYMENT

If you are not currently employed in a position that requires an RN license, please skip to Section D, MOST RECENT JOB SEARCH EXPERIENCE.

1. In how many positions are you employed as an RN?
 1 2 3 or more

For the following questions, please use the following definitions:

Principal Position Position where the greatest number of your working hours are spent.

Secondary Position Position where the second greatest number of your working hours are spent.

2. Please identify the type of setting that most closely corresponds to your nursing practice positions:

	Principal Position	Secondary Position
Ambulatory Surgical Center	<input type="radio"/>	<input type="radio"/>
Community/Neighborhood Health Center	<input type="radio"/>	<input type="radio"/>
Health Maintenance Organization/Managed Care Organization	<input type="radio"/>	<input type="radio"/>
Home Health Agency	<input type="radio"/>	<input type="radio"/>
Hospital, Ambulatory Care	<input type="radio"/>	<input type="radio"/>
Hospital, Emergency Room	<input type="radio"/>	<input type="radio"/>
Hospital, In-patient Care (non-psychiatric)	<input type="radio"/>	<input type="radio"/>
Hospital, Psychiatric	<input type="radio"/>	<input type="radio"/>
Nursing Home/Extended Care Facility	<input type="radio"/>	<input type="radio"/>
Nursing, Solo or Group Practice	<input type="radio"/>	<input type="radio"/>
Physician, Solo or Group Practice	<input type="radio"/>	<input type="radio"/>
Public Health Agency	<input type="radio"/>	<input type="radio"/>
School Health Service	<input type="radio"/>	<input type="radio"/>
School of Nursing/Nursing Education Program (Faculty)	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>

3. What percentage of your current nursing positions involve direct patient care?

	Principal Position	Secondary Position
Zero %	<input type="radio"/>	<input type="radio"/>
1-20%	<input type="radio"/>	<input type="radio"/>
21-40%	<input type="radio"/>	<input type="radio"/>
41-60%	<input type="radio"/>	<input type="radio"/>
61-80%	<input type="radio"/>	<input type="radio"/>
81-99%	<input type="radio"/>	<input type="radio"/>
100%	<input type="radio"/>	<input type="radio"/>

4. Please indicate the zip code of your principal nursing position (Please write the zip code AND mark the corresponding bubbles):

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

5. How many hours per week (all positions) do you work as an RN?

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

6. How many weeks do you expect to work in 1999 (all positions) as an RN (including paid vacation and sick leave)?

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

7. Please choose the activity that best corresponds to your principal position:

- Patient Care
- Teaching/Instruction/Research
- Program Administration
- Quality Assurance/Claims Review
- Other

8. At your principal position, what types of patients do you primarily care for? (Mark all that apply)

- Chronic Care
- Coronary Care
- Critical Care
- Emergency/Trauma
- Family
- General/Adult
- Geriatrics
- Medical/Surgical
- Neurological
- Newborn
- Ob/Gyn
- Oncology
- Operating Room
- Orthopedic
- Pediatric
- Psychiatric/Mental Health
- Rehabilitation
- Other

9. Since licensure in New York State, how many months have you been employed in any position that requires an RN license?

- 0–6 months
- 7–12 months
- 13–18 months
- 19–24 months
- 25+ months

10. What shifts do you usually work at your principal position?

- Days
- Mixed shifts
- Evenings
- Rotating shifts
- Nights
- Weekends only
- Other

11. Do you expect to be employed by your current employer for more than the next 12 months?

- Yes
- No
- I don't know

12. How satisfied are you with your:

Principal Position

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

Salary

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

13. What is your estimated gross annual salary from nursing positions? (Round to the nearest \$1,000)

\$,000

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Over \$99,000

14. What were the reasons that you chose your current principal position? (Mark all that apply)

- Desired this experience or specialization
- Desired this geographical location
- Only position available/offered
- Promotional opportunities
- Salary/benefits
- Tuition reimbursement
- Work schedule
- Other

15. Under what condition would you be willing to work additional hours at your current nursing positions? (Please choose one)

- Under no conditions/not willing to work additional hours
- If flexible hours were available
- If a higher salary rate were available
- If more/better child care were available
- If I could work in the specialty/setting of my choice
- If I could work different shifts/hours
- Other

D. MOST RECENT JOB SEARCH EXPERIENCE

If you have not searched for a position that requires an RN license, please skip to Section E, IMPRESSION OF JOB MARKET FOR RNs.

1. Did you have a difficult time finding an RN position you were satisfied with?

- Yes
- No

1a. If yes, what were the main reasons for the difficulties? (Mark all that apply)

- Overall lack of opportunities for RNs at my educational level
- Lack of opportunities for RNs in desired geographic location/region
- Lack of opportunities for RNs in desired practice setting
- Inadequate salary offered
- Lack of opportunities in hours/shifts desired
- Poor resources/career counseling services through school/program
- Family needs/constraints
- Other

2. How many months did it take to find a position as an RN?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13+

3. Did you change your employment plans because of limited RN job opportunities?

- Yes
- No

4. How many total RN positions did you apply for?

- None
- 1
- 2
- 3
- 4
- 5
- 6–10
- Over 10

5. How many total RN employment offers did you receive in response to these applications?

- None
- 1
- 2
- 3
- 4
- 5
- 6–10
- Over 10
- N/A

E. IMPRESSION OF JOB MARKET FOR RNs

1. With which geographical area are you most familiar with the job market for RNs? (Mark only one)

- Within 25 miles of my most recent nursing program
 Within 25 miles of where I practice (if different than the location of your nursing program)
 Other
 I am not familiar with any job market (Skip to question 3)

2. For the geographical area with which you are most familiar, please indicate your assessment of employment opportunities for RNs in the following employment settings:

	No Job Openings		Some Job Openings		Many Job Openings		Do Not Know
Hospitals—in-patient	1	2	3	4	5		<input type="radio"/>
Hospitals—ambulatory/emergency room	1	2	3	4	5		<input type="radio"/>
Nursing Home/Extended Care	1	2	3	4	5		<input type="radio"/>
Public Health/Community Health	1	2	3	4	5		<input type="radio"/>
Home Health Agency	1	2	3	4	5		<input type="radio"/>
Ambulatory Care or Doctor's Office	1	2	3	4	5		<input type="radio"/>
Other	1	2	3	4	5		<input type="radio"/>

3. What is your overall assessment of employment opportunities for newly licensed RNs within New York State?

- More jobs than there are nurses
 As many jobs as there are nurses
 Fewer jobs than there are nurses
 I don't know

F. CURRICULUM

1. How do you feel you were prepared for an RN position with respect to the following areas? (Please rate using the following 5-point scale)

	Not Well Prepared		Moderately Prepared		Well Prepared
Basic Science Knowledge	1	2	3	4	5
Caring for Acutely Ill Patients	1	2	3	4	5
Caring for Chronically Ill Patients	1	2	3	4	5
Clinical Skills	1	2	3	4	5
Computer Skills	1	2	3	4	5
Critical Thinking Skills	1	2	3	4	5
Interpersonal/Communication Skills	1	2	3	4	5
Pharmacology Knowledge	1	2	3	4	5
Technical Skills	1	2	3	4	5
Administrative/Supervisory Skills	1	2	3	4	5
Management Skills	1	2	3	4	5

2. Please rate your RN Program on the following characteristics and how it affected your educational experience:

	Negative		No Effect		Positive		Not Sure
Affiliations with health care providers	1	2	3	4	5		<input type="radio"/>
Availability of labs for practice/training	1	2	3	4	5		<input type="radio"/>
Career outreach/resources	1	2	3	4	5		<input type="radio"/>
Clinical experience	1	2	3	4	5		<input type="radio"/>
Contact with patients	1	2	3	4	5		<input type="radio"/>
Faculty expertise and attention	1	2	3	4	5		<input type="radio"/>
Quality of instruction	1	2	3	4	5		<input type="radio"/>

3. Would you be willing/able to complete a brief nursing survey electronically (over the Internet) in the future?

- I am willing and able to participate in an Internet survey
 I am interested, but I do not have regular access to the Internet
 I am not interested

4. In the space provided below, please provide any additional comments or observations you may have about the RN workforce and/or the job market for Registered Nurses:

Thank you for taking the time to help in this study

Please return the completed questionnaire in the enclosed business reply envelope to:

Center for Health Workforce Studies
 School of Public Health, University at Albany
 One University Place, Suite 200 • Rensselaer, NY 12144-3456

If you have questions about the questionnaire or the study, please feel free to call the Center at 518-402-0250.



PLEASE DO NOT WRITE IN THIS AREA

SERIAL #

APPENDIX C

Nursing School Dean “Fax Back” Survey

Fax Back Survey

1. Number of graduates from your nursing program(s).

Degree Level	1996/97 Grads	Is this correct?	Corrected # of graduates (if applicable)	1997/98 Grads	1998/99 Grads	1999/00 Grads (est.)	00/01 Grads (est.)
		<input type="radio"/> Yes <input type="radio"/> No					
Other degree /certificate							

2. What is your estimate of the number of your **new student applications** compared to the previous academic year?

1999/00 (compared to 98/99)	2000/01(compared to 99/00)
<input type="radio"/> much higher	<input type="radio"/> much higher
<input type="radio"/> somewhat higher	<input type="radio"/> somewhat higher
<input type="radio"/> about the same	<input type="radio"/> about the same
<input type="radio"/> somewhat lower	<input type="radio"/> somewhat lower
<input type="radio"/> lower	<input type="radio"/> lower

3. What is your estimate of the number of your **new student acceptances** compared to the previous academic year?

1999/00 (compared to 98/99)	2000/01(compared to 99/00)
<input type="radio"/> much higher	<input type="radio"/> much higher
<input type="radio"/> somewhat higher	<input type="radio"/> somewhat higher
<input type="radio"/> about the same	<input type="radio"/> about the same
<input type="radio"/> somewhat lower	<input type="radio"/> somewhat lower
<input type="radio"/> lower	<input type="radio"/> lower

4. What is your perception of the job market for new registered nurses in New York State?

	Many Job Openings		Some Job Openings		No Job Openings	Unsure
	1	2	3	4	5	?
a. Overall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Nursing Homes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Physician's Office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Home Care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. How would you compare the overall job market for new registered nurses this year to the job market last year?

- Much better than last year
- A little better than last year
- About the same as last year
- A little worse than last year
- Much worse than last year

**PLEASE FAX THIS LETTER BACK TO
THE CENTER FOR HEALTH WORKFORCE STUDIES
(518) 402-0252**

APPENDIX D

Survey of RNs Completing Baccalaureate Programs in New York State

1999 SURVEY OF RECENT GRADUATES OF BACCALAUREATE COMPLETION PROGRAMS IN NURSING IN NEW YORK STATE

Center for Health Workforce Studies
School of Public Health, University at Albany

This questionnaire is designed to obtain information on the supply, demand, and distribution of registered nurses who graduated from a BSN completion program in 1998 in order to assist the nursing education community in meeting future health care needs. Your response will be anonymous and will be reported only in statewide and regional tabulations and summaries.

Please mark only one answer for each question unless otherwise directed.

A. DEMOGRAPHIC CHARACTERISTICS

- Gender: Male Female
- Age: _____ years
- Citizenship Status
 - Native Born U.S.
 - Naturalized U.S.
 - Permanent Resident
 - H-1, H-2, H-3 Temporary Worker
 - J-1, J-2 Exchange Visitor
 - Other
- Race/Ethnic Category:
 - Asian or Pacific Islander
 - Black/African American (not Hispanic)
 - Hispanic/Latino (Puerto Rican)
 - Hispanic/Latino (All Other)
 - Native American/Alaskan
 - White (non Hispanic)
 - Other
- How many minor children do you have living at home?
 - 0 to 6 years: 0 1 2 3+
 - 7-14 years: 0 1 2 3+
 - 15-18 years: 0 1 2 3+
- Are you currently working in a position that requires an RN license? Yes No

6a. If no, mark all reasons that apply:

- Family/Personal reasons
- Pursuing additional nursing education
- Pursuing additional non-nursing education
- Working as LPN
- Working in healthcare, but in a non-nursing position
- Working in a non-healthcare position
- Cannot find an RN position
- Other _____

6b. If not currently in a position that requires an RN License, do you expect to be employed in such a position:

- Within the next 6 months
- In 7-12 months
- In 13-24 months
- In over 25 months
- Do not plan to work in such a position in the future

B. EDUCATION AND TRAINING

- What nursing education have you completed (mark all that apply)?
 - Practical Nursing Program
 - RN Diploma Program
 - Associate Degree
 - Baccalaureate Degree
 - Advanced Nursing Degree
 - Master's Degree
 - Doctoral Degree
- Year when you completed your first basic RN education:
19__ __
- What was the location of the basic RN education program where you were prepared to take the RN licensing exam?
 - New York State
 - Other U.S. State
 - Foreign
 - _____ or Territory _____ Country

3a. If your basic RN education program is located in New York State, please identify the program using the attached coding sheet. _____

Did you work as an RN before entering your BSN completion program? Yes No
- If yes, how many years did you work as an RN before entering your BSN completion program (exclude any breaks in your employment, i.e., for child care, etc.) ?
_____ years
- If yes, please identify the type of setting that most closely corresponds to the nursing position you held before entering your BSN completion program.
 - Ambulatory Surgical Center
 - Community/Neighborhood Health Center
 - HMO or Managed Care Organization
 - Home Health Agency
 - Hospital, Ambulatory Care
 - Hospital, Emergency Room
 - Hospital, In-patient Care (non-psychiatric)
 - Hospital, Psychiatric
 - Nursing Home/Extended Care Facility
 - Nursing, Solo or Group Practice
 - Physician, Solo or Group Practice
 - Public Health Agency
 - School Health Service
 - School of Nursing/Nursing Ed Program (Faculty)
 - Other _____

Do you have any non-nursing degrees? (mark all that apply)

- I do not have any non-nursing degrees
- Associate Degree
- Baccalaureate Degree
- Master's Degree
- Doctoral Degree
- Other _____

C. YOUR BACCALAUREATE DEGREE

1. Why did you decide to get your Baccalaureate degree? (Mark all that apply)
 - Higher pay
 - Change in practice setting
 - Career advancement
 - Improve skills
 - Change to employment fields outside patient-care nursing
 - Other _____
2. Did you experience any of the following as a result of earning your baccalaureate degree?: (Mark all that apply)
 - Higher pay
 - New position with same employer (lateral change)
 - New position with same employer (promotion)
 - New position with different employer (lateral change)
 - New position with different employer (promotion)
 - Improved skills
 - Change to employment fields outside patient-care nursing
 - Other _____
3. Did you receive tuition reimbursement for getting your Baccalaureate degree?
 - Yes, from employer during baccalaureate program
 - Yes, from employer after baccalaureate program
 - Yes, from school
 - Yes, from other _____
 - No
4. Did you work as an RN while you were studying for your baccalaureate degree?
 - Yes
 - No

D. CURRENT RN EMPLOYMENT

(If you are not currently employed in a position that requires an RN license, please skip to Section E. MOST RECENT JOB SEARCH EXPERIENCE)

1. In how many positions are you employed as an RN?
 - 1
 - 2
 - 3 or more

For the following questions, please use the following definitions:

Principal Position **Position where the greatest number of your working hours are spent**
 Secondary Position **Position where the second greatest number of your working hours are spent**

2. Please identify the type of setting that most closely corresponds to your nursing practice positions:

	<u>Principal</u>	<u>Secondary</u>
Ambulatory Surgical Center	<input type="radio"/>	<input type="radio"/>
Community/Neighborhood Health Center	<input type="radio"/>	<input type="radio"/>
Health Maintenance/Managed Care Organization	<input type="radio"/>	<input type="radio"/>
Home Health Agency	<input type="radio"/>	<input type="radio"/>
Hospital, Ambulatory Care	<input type="radio"/>	<input type="radio"/>
Hospital, Emergency Room	<input type="radio"/>	<input type="radio"/>
Hospital, In-patient (non-psychiatric)	<input type="radio"/>	<input type="radio"/>
Hospital, Psychiatric	<input type="radio"/>	<input type="radio"/>
Nursing Home/Extended Care Facility	<input type="radio"/>	<input type="radio"/>
Nursing, Solo or Group Practice	<input type="radio"/>	<input type="radio"/>
Physician, Solo or Group Practice	<input type="radio"/>	<input type="radio"/>
Public Health Agency	<input type="radio"/>	<input type="radio"/>
School Health Service	<input type="radio"/>	<input type="radio"/>
School of Nursing/Nursing Ed. Program (Faculty)	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>

3. What percentage of your current nursing positions involves direct patient care?

	<u>Principal Position</u>	<u>Secondary Position</u>
Zero %	<input type="radio"/>	<input type="radio"/>
1-20%	<input type="radio"/>	<input type="radio"/>
21-40%	<input type="radio"/>	<input type="radio"/>
41-60%	<input type="radio"/>	<input type="radio"/>
61-80%	<input type="radio"/>	<input type="radio"/>
81-99%	<input type="radio"/>	<input type="radio"/>
100%	<input type="radio"/>	<input type="radio"/>

4. Please indicate the zip code of your principal nursing position: _____

5. How many hours per week (all positions) do you work as an RN? _____ hours

6. How many weeks do you expect to work in 1999 (all positions) as an RN (including paid vacation and sick leave)? _____ weeks

7. Please choose the activity that best corresponds to your principal position:

- Patient Care
- Teaching/Instruction/Research
- Program Administration
- Quality Assurance/Claims Review
- Other _____

8. At your principal position, what types of patients do you primarily care for? (mark all that apply)
- | | |
|--|---|
| <input type="radio"/> Chronic Care | <input type="radio"/> Newborn |
| <input type="radio"/> Coronary Care | <input type="radio"/> Ob/Gyn |
| <input type="radio"/> Critical Care | <input type="radio"/> Oncology |
| <input type="radio"/> Emergency/Trauma | <input type="radio"/> Operating Room |
| <input type="radio"/> Family | <input type="radio"/> Orthopedic |
| <input type="radio"/> General/Adult | <input type="radio"/> Pediatric |
| <input type="radio"/> Geriatrics | <input type="radio"/> Psychiatric/Mental Health |
| <input type="radio"/> Medical/Surgical | <input type="radio"/> Rehabilitation |
| <input type="radio"/> Neurological | <input type="radio"/> Other _____ |
9. What shifts do you usually work at your Principal Position?
- | | |
|------------------------------------|---------------------------------------|
| <input type="radio"/> Days | <input type="radio"/> Rotating Shifts |
| <input type="radio"/> Mixed Shifts | <input type="radio"/> Nights |
| <input type="radio"/> Evenings | <input type="radio"/> Weekends only |
| <input type="radio"/> Other _____ | |
10. Since earning your Baccalaureate degree, how many months have you been employed in any position that requires an RN license?
- | | | |
|-----------------------------------|------------------------------------|----------------------------------|
| <input type="radio"/> 0-6 months | <input type="radio"/> 13-18 months | <input type="radio"/> 25+ months |
| <input type="radio"/> 7-12 months | <input type="radio"/> 19-24 months | |
11. Do you plan to be employed by your current employer for more than the next 12 months?
- | | | |
|---------------------------|--------------------------|------------------------------------|
| <input type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> I don't know |
|---------------------------|--------------------------|------------------------------------|
12. How satisfied are you with your:
- | | <u>Principal Position</u> | <u>Salary</u> |
|-----------------------|---------------------------|-----------------------|
| Very Satisfied | <input type="radio"/> | <input type="radio"/> |
| Somewhat Satisfied | <input type="radio"/> | <input type="radio"/> |
| Somewhat Dissatisfied | <input type="radio"/> | <input type="radio"/> |
| Very Dissatisfied | <input type="radio"/> | <input type="radio"/> |
13. What is your estimated gross annual salary from your nursing positions? (round to the nearest \$1,000)
- \$_____,000
14. What were the reasons that you chose your current principal position (mark all that apply)?
- | |
|---|
| <input type="radio"/> Desired this experience or specialization |
| <input type="radio"/> Desired this geographical location |
| <input type="radio"/> Only position available/offered |
| <input type="radio"/> Promotional opportunities |
| <input type="radio"/> Salary/benefits |
| <input type="radio"/> Tuition reimbursement |
| <input type="radio"/> Work schedule |
| <input type="radio"/> Other _____ |

15. Under what condition would you be willing to work additional hours at your current nursing positions? (Please choose one)
- | |
|--|
| <input type="radio"/> Under no conditions/not willing to work additional hrs |
| <input type="radio"/> If flexible hours were available |
| <input type="radio"/> If a higher salary were available |
| <input type="radio"/> If more/better child care were available |
| <input type="radio"/> If I could work in the specialty/setting of my choice |
| <input type="radio"/> If I could work different shifts/hours |
| <input type="radio"/> Other _____ |
16. How much of an increase in salary did you receive after completing your Baccalaureate in Nursing?
- \$_____/hour

E. MOST RECENT JOB SEARCH EXPERIENCE

If you have not searched for a new position since earning your baccalaureate, please skip to Section F, IMPRESSION OF JOB MARKET FOR RN'S

1. Did you have a difficult time finding a new RN position that you were satisfied with?
- | | |
|---------------------------|--------------------------|
| <input type="radio"/> Yes | <input type="radio"/> No |
|---------------------------|--------------------------|
2. If yes, what were the main reasons for the difficulties? (Mark all that apply).
- | |
|---|
| <input type="radio"/> Overall lack of practice opportunities for RNs with Baccalaureates |
| <input type="radio"/> Lack of opportunities for RNs with Baccalaureates in desired geographic location/region |
| <input type="radio"/> Lack of opportunities for RNs with Baccalaureates in desired practice setting |
| <input type="radio"/> Inadequate salary offered |
| <input type="radio"/> Lack of opportunities in hours/shifts desired |
| <input type="radio"/> Poor resources/career counseling services through school/program |
| <input type="radio"/> Family needs/constraints |
| <input type="radio"/> Other _____ |
3. How many months did it take to find a new RN position?
- ____ months
4. How many total RN positions did you apply for?
- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------------|
| <input type="radio"/> 0 | <input type="radio"/> 2 | <input type="radio"/> 4 | <input type="radio"/> 6-10 |
| <input type="radio"/> 1 | <input type="radio"/> 3 | <input type="radio"/> 5 | <input type="radio"/> Over 10 |
5. How many RN employment offers did you receive in response to these applications?
- | | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------------|---------------------------|
| <input type="radio"/> 0 | <input type="radio"/> 2 | <input type="radio"/> 4 | <input type="radio"/> 6-10 | <input type="radio"/> N/A |
| <input type="radio"/> 1 | <input type="radio"/> 3 | <input type="radio"/> 5 | <input type="radio"/> Over 10 | |

F. IMPRESSION OF JOB MARKET FOR RNs

1. With which area are you most familiar with the job market for RNs?
- | |
|--|
| <input type="radio"/> Within 25 miles of my baccalaureate program |
| <input type="radio"/> Within 25 miles of where I practice (if different than the location of your baccalaureate program) |
| <input type="radio"/> Other _____ |
| <input type="radio"/> I am not familiar with any job market (skip to #3) |

2. For the geographic area with which you are most familiar, please indicate your assessment of employment opportunities for RNs with Baccalaureate Degrees and RNs without Baccalaureate Degrees in the following employment settings?

	① RN ^s WITH Baccalaureate Degrees				② RN ^s WITHOUT Baccalaureate Degrees						
	No Job Openings	Some Job Openings	Many Job Openings	Do Not Know	No Job Openings	Some Job Openings	Many Job Openings	Do Not Know			
a. Hospitals – in-patient.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○
b. Hospitals – ambulatory/emergency room.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○
c. Nursing Home/Extended Care.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○
d. Public Health/Community Health.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○
e. Home Health Agency.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○
f. Ambulatory Care or Doctor’s Office.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○
g. Other: _____.....	①.....	②.....	③.....	④.....	⑤.....	①.....	②.....	③.....	④.....	⑤.....	○

3. What is your overall assessment of employment opportunities for RNs with baccalaureate degrees within New York State?
- More jobs than there are nurses
 As many jobs as there are nurses
 Fewer jobs than there are nurses
 I don't know
4. How would you compare the job market for RNs with baccalaureate degrees compared to RNs with associate degrees?
- More jobs for baccalaureate RNs
 As many jobs for baccalaureate as associate RNs
 More jobs for associate RNs
 I don't know

G. CURRICULUM

1. How do you feel you were prepared for an RN position by your baccalaureate program with respect to the following areas?

	Not Well Prepared	Moderately Prepared	Well Prepared
a. Basic Science Knowledge.....	①	②	③ ④ ⑤
b. Caring for Acutely Ill Patients	①	②	③ ④ ⑤
c. Caring for Chronically Ill Patients.....	①	②	③ ④ ⑤
d. Clinical Skills.....	①	②	③ ④ ⑤
e. Computer Skills.....	①	②	③ ④ ⑤
f. Critical Thinking Skills.....	①	②	③ ④ ⑤
g. Interpersonal/Communication Skills	①	②	③ ④ ⑤
h. Pharmacology Knowledge.....	①	②	③ ④ ⑤
i. Technical Skills.....	①	②	③ ④ ⑤
j. Administrative/Supervisory Skills.....	①...	②	③ ④ ⑤
k. Management Skill	①	②	③ ④ ⑤

2. Please rate your baccalaureate program on the following characteristics and how it affected your educational experience:

	Negative	No Effect	Positive	Not Sure		
a. Affiliations with health care providers.....	①.....	②.....	③.....	④.....	⑤.....	○
b. Availability of labs for practice.....	①.....	②.....	③.....	④.....	⑤.....	○
c. Career outreach/resources.....	①.....	②.....	③.....	④.....	⑤.....	○
d. Clinical experience.....	①.....	②.....	③.....	④.....	⑤.....	○
e. Contact with patients.....	①.....	②.....	③.....	④.....	⑤.....	○
f. Faculty expertise and attention.....	①.....	②.....	③.....	④.....	⑤.....	○
g. Quality of instruction.....	①.....	②.....	③.....	④.....	⑤.....	○

3. In the space provided below please provide any additional comments or observations you may have about the RN workforce and/or the job market for Registered Nurses **WITH BACCALAUREATE DEGREES**:
