RESEARCH REPORT

Registered Nurses in New York State, 2002

Volume III:

Supplement A – In-Patient Hospital Staff RNs, A Special Risk Group

OCTOBER, 2003

Acknowledgements

TABLE OF CONTENTS – VOLUME III

PAGE

List of Figures – Volume III   page

List of Tables – Volume III   page

Introduction

BACKGROUND

In April 2001, the State Education Department (SED) presented the Board of Regents with a report on the nursing shortage in New York State.[1] The report was part of a series designed to address important issues affecting the future of professional regulation. The analysis offered compelling evidence of the nursing shortage projected in coming years. The report highlighted the root causes of the shortage, and how the current shortage differed structurally and demographically from previous shortages. The Board of Regents acknowledged the impending nursing shortage as having significant implications for the health care system and their public protection mission. As Commissioner Richard P. Mills emphasized:

> "One important role of the Board of Regents is to identify public protection issues and to take action to address them swiftly. Nothing is more important to ensure our future well-being. Health care and education go hand in hand to make our State an economic leader and a good place to live." [2]

In response to the potential crisis and in carrying out the Regents regulatory responsibility for over 300,000 licensed nurses in the State, Chancellor Carl T. Hayden called for the formation of a Blue Ribbon Task Force on the Future of Nursing and tapped Regent Diane O'Neill McGivern, an innovator in nursing education, to lead it. Regent McGivern convened two Task Force meetings later that year (on June 28 and September 7).   She invited 26 influential leaders in healthcare, education, and government to participate in the Task Force.   Members were selected to represent significant areas of responsibility uniquely positioned to address the shortage.   The Task Force advanced a set of recommendations focused upon the growing shortage.[3]

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[1] The New York State Board of Regents, Office of the Professions, *The Nursing Shortage*, BR (D) 6.1-2 and attachment, April 16, 2001 (Albany, NY).

[2] Commissioner Richard P. Mills, New York State Board of Regents Blue Ribbon Task Force on the Future of Nursing, available at http://www.op.nysed.gov/tfwork.html.

[3] The recommendations are fully described in two separate full board Regents reports: *Addressing Nursing and Other Professional Work Force Shortages* and *Follow- up Activities on Recommendations of the Regents Blue Ribbon Task Force on the Future of Nursing,* December 4, 2001 and March 4, 2002, respectively (Albany, NY).

One of the six broad strategies recommended by the Task Force was to improve data collection and develop a reliable, centralized source of data upon which employers, policymakers, futurists, researchers and legislators may base public policy and resource allocations. In addition, the Regents recognized that the data source needed to include current, comprehensive information about specific characteristics, attributes, and expectations of New York's nurses. Accordingly, a large-scale randomized survey of registered nurses was designed during the summer of 2002 in partnership with the Fiscal Analysis and Research Unit and the Office of the Professions in the New York State Education Department (SED) and other key stakeholders.

RESEARCH OBJECTIVES

The current survey is the sixth study of the New York State registered nursing population undertaken by the Department.[4] This survey, like its predecessors, attempts to provide a comprehensive, quantitative description of the currently licensed registered nurses in New York State.[5] Unlike prior SED studies, however, this one examines work conditions and organizational climate factors known to be critical in creating a positive culture of retention (i.e., a workplace that empowers and is respectful of nursing staff). Additionally, respondents in this survey were asked to directly evaluate a variety of policy initiatives intended to improve the attractiveness of the profession.

Volume I

The primary research objectives of Volume I are essentially to report on demographic data. This volume of the report:

➢ Describes with precision the major demographic, occupational, and educational characteristics of registered nurses in New York State (as of September, 2002);

➢ Compares, where possible, current demographic findings with findings from earlier nursing studies conducted in New York State;

➢ Synthesizes briefly current findings concerning projections of nursing supply and demand; and,

➢ Describes nurses' own views about supply and demand issues in their particular work settings and geographic locales.

Volume II

The primary research objectives of the Volume II report are far more analytic in character. The second report volume:

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[4] The previous studies were conducted in 1973,1977,1983,1989, and 1995.

[5] More precisely, this nursing sample is based upon an extract from the nursing licensure files as of August 28, 2002.

- Examines important conditions of the work setting, with particular attention to certain key aspects of the work climate (e.g., professional autonomy, cooperation, job satisfaction, organizational commitment, promotional opportunity, etc.);

- Determines the net impact and relative importance of these climate factors upon nurses' overall job satisfaction and organizational commitment;

- Determines the net effects of global job satisfaction and organizational commitment upon actual job-search behaviors, leave-taking decisions, and recommendations to others about a career in the nursing profession;

- Highlights nurses' level of support for a variety of policy initiatives of interest to the Regents Blue Ribbon Task Force and the Board of Regents; and,

- Proposes recommendations based upon these findings.

Volume III

Volume III accomplishes the same objectives as Volumes I and II, but with a focus on in-patient hospital staff RNs. Although the experiences of in-patient hospital staff RNs, and numerous other job-title and work-setting groups, were described in Volumes I and II, their large numbers, their criticality to hospital-based patient care, and their unusually high level of job stress led us to conclude that a more in-depth analysis of this particular group was warranted.

The "Price-Mueller" Conceptual Model of Employee Turnover

The theoretical perspective that has shaped the choice of measures is an organizational theory of voluntary turnover.[6] The study relies heavily upon the work of James L. Price and his colleagues at the University of Iowa. The conceptual model of employee turnover is based on the work of Price and Mueller. It is well suited to understanding problems in organizational retention, especially in the health care sector.

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[6] See James L. Price and Charles W. Mueller, *Absenteeism and Turnover of Hospital Employees*, (Greenwich, CT: JAI Press, 1986).

Supplement A: In-Patient Hospital Staff RNs

Introduction

In Volume II we examined several nursing groups of special policy interest in terms of their "organizational climate" experience. One of those groups was hospital-based staff RNs – a group who reported their job experience to be substantially less satisfactory than RNs in other settings. This Supplement examines in greater detail the workplace experiences of the large, critically positioned group of in-patient hospital staff RNs. These nurses serve as "front-line" professionals in the provision of hospital-based care and comprise 37.1 percent of survey respondents working as RNs in New York State. This Supplement also examines the experiences of other groups of RNs, in addition to staff nurses, working within the in-patient hospital setting, and compares them to New York State RNs working outside of that setting.

Why a Special Supplement on NYS In-Patient Hospital Staff Nurses?

The rationale for devoting an entire supplement of this report to this special "at risk" population of RNs is fourfold:

> *The large numbers of this group – 3,682 survey respondents identified themselves as in-patient hospital staff nurses*. This large number indicates that over a third of all nurses currently working in New York State are employed in in-patient hospital staff roles. No other professional group of nurses sharing the same job title and working in the same job setting is even remotely similar in size. In addition, the homogeneity of work setting and job title provide a unique opportunity to repeat analyses performed earlier in this report while being able to "control for" job setting and job title.

> *The high degree of stress reported by this group – this group is the most dissatisfied and the most likely to leave the profession at a premature age.* Volume II demonstrated that these staff nurses, when compared to other RNs working in the State, report higher levels of workload- and resource-stress, and report experiencing great stress more frequently. Furthermore, their job climate scale scores were significantly lower (i.e., "poorer") than the climate ratings provided by all other working RNs. These scales included measures of instrumental communication, nurse-nurse interaction, autonomy, nurse-physician interaction, and satisfaction with pay. Finally, their global job satisfaction and organizational commitment scale scores were among the lowest, and their average age at the time they report planning to leave nursing was considerably younger than that of other RNs planning on leaving the profession.

> *The high percentage of young entrants to the profession included in this group – for the majority of RNs working in New York State, in-patient hospital staff*

nursing is their first professional employment as an RN. The fact that young entrants to the profession most often begin their careers in the job title associated with the highest levels of job stress and dissatisfaction has important implications for recruitment and retention.

➢ *The unique demographic characteristics of this group* – including their younger age, lower level of experience and education, and over-representation among ethnic minority RNs and RNs born and/or educated outside of the United States – suggest that the job of in-patient hospital staff nurse is not a job highly sought after by more experienced RNs who can readily obtain other nursing employment with comparable pay. Consequently, as the nursing shortage worsens, and competition for RNs increases, in-patient hospitals (and their high need patients) are likely to face soonest, and most acutely, the challenges presented by the shortage

Organization of this Supplement

This Supplement first examines the standard demographic characteristics of in-patient hospital nurses (and three "comparison" groups). Their characteristics are further examined by job location, setting, and employment factors, and then job climate scales, global job satisfaction, and both timing and reasons for exiting the profession are described. The three "comparison" groups, in addition to in-patient hospital staff RNs, included in most analyses presented in this Supplement are: 1) in-patient hospital nurse managers; 2) all "other" in-patient hospital RNs (not including staff nurses and managers); and, 3) all "other" RNs working in New York State (outside of the in-patient hospital setting).

Unless otherwise stated, the analyses presented are limited to the 10,055 RN Nursing Survey respondents who were working as nurses in New York State as of September 2002. Of this number, however, only 9,916 (or 98.6 percent) gave useable responses for their job title and job setting.[1] Similarly, a small percentage of additional cases could not be included within specific analyses, either because of missing or unusable response data for specific survey questions. For this reason, the sample Ns displayed below will vary somewhat from table to table.

THE SIZE OF THE NYS IN-PATIENT HOSPITAL STAFF RN POPULATION

Different Nursing Survey questions asked RN respondents to specify both the settings in which they worked and the job titles that they held. Almost half (46.5 percent) of respondents indicated that they worked in an in-patient hospital setting, the most frequently selected response choice by far. When identifying their job titles, more

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[1] Respondents were directed by survey instructions to give only one response to question 4, "primary employment setting," and question 5, "job title." If respondents gave two responses and one was "other," the "other" response was discarded. Otherwise, if respondents gave multiple responses most often all responses had to be discarded. This fact largely accounts for the 139 "missing values" for job title or job setting.

than half (56.1 percent) of all respondents indicated that they worked as staff nurses, a far greater number than selected any other job title choice.

Figure 1 demonstrates the extent to which the in-patient hospital employment setting responses and the staff nurse job title responses overlapped among the survey respondents – more than one third of RNs indicated that they worked as in-patient hospital staff RNs (37.1 percent). No other group of RNs working in the same setting with the same job title in New York State comes close to approximating the size of this group, which included 3,682 survey respondents.

Figure 1
Percentages of RNs in NYS Working in In-Patient Hospitals, Working as Staff Nurses, Working in the Overlapping Category, "In-Patient Hospital Staff Nurses", and Working Neither as Staff Nurses Nor as In-Patient Hospital Nurses

"Other" RNs Working in In-Patient Hospitals (Not Staff RNs) 6.0% + 3.4% = 9.4%

Neither In-Patient Hospital Nor Staff RNs

"Other" Staff RNs (Not Working in In-Patient Hospitals) Total =19.0%

Staff RNs Working in In-Patient Hospitals

- Other In-Patient Hospital RNs = 6.0%
- In-Patient Hospital Nurse Managers = 3.4%
- In-Patient Hospital Staff RNs = 37.1%
- Outpatient Hospital Staff RNs = 4.7%
- Nursing Home Staff RNs = 3.3%
- Ambulatory Care Staff RNs = 2.5%
- Physician's Office Staff RNs = 2.3%
- All Other Staff RNs = 6.2%
- Not Staff & Not In-Patient Hospital RNs = 34.4%

The bar charts shown in Figures 2 and 3 on the following pages also underscore the very large percentage of RNs working as staff nurses who work in in-patient hospital facilities (67.1 percent), and the very large percentage of RNs working in in-patient hospital facilities who identified themselves as staff nurses (79.6 percent).

Figure 2

Distribution in Different Job Settings of All Currently Working Staff Nurses in NYS

N = 5,564 = 56.1 Percent of All RNs Currently Working in NYS

For All Staff RNs in NYS:
Percentage Working in Different Job Settings

Job Setting	Percent
Hospital (In-Patient)	67.1
Hospital (Outpatient)	8.5
Nursing Home	6.0
Ambulatory Care	4.5
Physician's Office	4.2
School Health Nursing	2.6
Home Health Agency	2.3
Other Health Related	2.1
Government/Professional Health Org.	0.9
Diagnostic/Treatment Center	0.7
Business or Industry	0.4
Other Non-Health Related	0.3
HMO/Insurance/Managed Care	0.2
Institutions of Higher Ed.	0.1
Nursing Education	0.0
Private Practice	0.0

Percent

An additional 7.4 percent of RN respondents working in in-patient hospital facilities identified themselves as nurse managers. RN managers were the second largest occupational group (by job title) working within in-patient hospitals after staff nurses, and provide a secondary focus for this Supplement. The ratio of their numbers in in-patient hospitals compared to staff RNs in these settings is approximately 1 manager per 11 staff nurses, according to our sample.

The remaining 13 percent of RNs working within in-patient hospitals identified themselves as working in a variety of different job titles, with no one job title representing more than 2.5 percent of in-patient hospital RNs. In most of the figures and tables presented in subsequent sections, where sample size permits, we explicitly compare groups of RNs working in in-patient hospital settings – including staff nurses,

nurse managers, and this heterogeneous group of all "others" working in an in-patient hospital facility.

Figure 3
Distribution of Job Titles of All RNs Working in NYS In-Patient Hospitals:
N = 4,650 = 47.0 Percent of All RNs Working in New York State

For All In-Patient Hospital RNs Working in NYS:
Percent in Different Job Titles

Job Title	Percent
Staff Nurse	79.6
Nurse Manager/Patient Care Coordinator	7.4
Other	3.5
Claims/QA/UR/Risk Management	2.5
Clinical Nurse Specialist	2.1
Nurse Practitioner	1.7
Director/VP/Chief of Nursing	1.5
Certified Registered Nurse Anesthetist	0.7
Independent Practitioner/Private Duty RN	0.5
Consultant/Researcher	0.4
Dean/Faculty in RN Ed. Program	0.1
Public/Community Health RN	0.0

Percent

In Table 1 we reweight sample respondents in order to provide population estimates of the actual numbers of RNs currently working in New York State in-patient hospitals as a "staff nurse" (61,500) or "nurse manager" (5,677), or some "other" job title within the in-patient hospital setting (9,967). The table also displays estimated statewide counts for the comparison group comprising all other RNs currently working in New York State outside of the in-patient hospital setting (88,495). The second column of Table 1 shows the estimated percentage of all RNs currently working in New York State constituted by each of these four groups – 37.1 percent are in-patient staff nurses, 3.4 percent are nurse managers, 6.0 percent hold "other" job titles within the in-patient hospital setting, and 53.4 percent fall within the comparison group of "all other RNs" working in New York State (but not within the in-patient hospital setting).

Actual RN counts in Table 1 are based upon two distinct methods for estimating the numbers of full-time equivalent (FTE) RNs that correspond to these three groupings. The two methods used for estimating FTEs are described in greater detail in Volume I of this report. The "all hours" method involves first calculating the "average hours/week" worked by each group of nurses – including overtime and extra job hours in addition to regularly scheduled primary job hours.[2] Column three of Table 1 shows that the average work hours/week for in-patient hospital staff nurses is 39.6 hours, for in-patient hospital nurse managers, 45.3 hours, and for the comparison group of all other RNs, 38.1 hours. In effect, in-patient hospital staff nurses work on average 1.5 hours more per week than do nurses in the comparison group; and in-patient hospital nurse managers work a startling 7.2 hours more per week on average than the comparison group RNs.

Table 1
Estimated Current FTEs by Job Title: Two Methods

Job Titles	Estimated Count	Column %	Average Hours/Week	FTEs All Hours Method[3]	Column %	FTEs FT = 1.0 FTE/ PT = .5 FTE Method	Column %
In-Patient Hospital Staff Nurse	61,500	37.1	39.6	61,015	37.8	52,298	37.1
In-Patient Hospital RN Manager	5,677	3.4	45.3	6,434	4.0	5,494	3.9
All Other In-Patient Hospital RNs	9,967	6.0	40.1	9,997	6.2	8,858	6.3
All Other RNs Working NYS	88,495	53.4	38.1	84,260	52.2	74,324	52.7
Total	165,640	100	39.1	161,706	100	140,974	100

The results of the second method used to calculate FTEs are shown in columns six and seven of Table 1. This method gives a weight of 1 FTE for each RN working full time (regardless of whether they work overtime or extra hours), and a weight of 0.5 FTE for each RN working part time. Although this is a method conventionally and extensively used for calculating FTEs in the labor market literature, it is not sensitive to the large numbers of extra hours frequently worked by many RNs and thus very likely under-estimates the full FTE contributions that in-patient hospital staff nurses and managers make to the RN workforce – due to their unusually long average workweeks.

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[2] The "all hours" method of calculating FTEs for each group of RNs "weights" the "estimated count" for each group by the "average hours/week" worked by that group. Because all three groups of in-patient hospital RNs work more hours/week, on average, than do the nurses in the large comparison group of all RNs working outside the in-patient hospital setting, the percentages of the (estimated) total number of FTE RNs accounted for by these three groups are greater than the total RN "count" percentages that these three groups accounted for. For example, in-patient hospital staff RNs represent 37.8 percent of all (estimated) RN FTEs (compared to 37.1 percent of the total RN "count"); in-patient hospital nurse managers represent 4.0 percent of all (estimated) RN FTEs (compared to 3.4 percent of the total RN count).

Demographic Characteristics that Distinguish In-Patient Hospital Staff RNs

The Average Age of In-Patient Hospital Staff RNs is Much Lower Than the Average Age of All Other RNs

Figure 4 highlights the dramatic differences in the average age, years of work experience, and year of RN graduation of in-patient hospital staff nurses when compared to all other NYS nurses. Taken as a whole, the in-patient staff nurse group is a significantly younger and less experienced group of RNs than their colleagues, who are, for the most part, working in settings *other than* in-patient hospitals.

Figure 4
Age, Years of Experience, and Year of Completing Basic RN Preparation:
In-Patient Hospital Staff RNs, In-Patient Hospital Nurse Managers, Other In-Patient Hospital RNs, and All Other Working RNs in NYS Compared

Average Age

Group	Age
In-Patient Hospital Staff Nurses	43.4
In-Patient Hospital Nurse Managers	47.6
All Other In-Patient Hospital RNs	49
All Other RNs Working in NYS	48.6

Years of Experience Working as RN

Group	Years as RN
In-Patient Hospital Staff Nurses	15.8
In-Patient Hospital Nurse Managers	21.8
All Other In-Patient Hospital RNs	23.2
All Other RNs Working in NYS	21.1

Year Finished Basic Nursing Preparation

Group	Year of Degree
In-Patient Hospital Staff Nurses	1985
In-Patient Hospital Nurse Managers	1979
All Other In-Patient Hospital RNs	1977
All Other RNs Working in NYS	1979

The first bar chart in Figure 4 illustrates that the average age of in-patient hospital staff RNs (43.4 years) is 4.2 years younger than the average age of nurse managers (47.6 years), 5.6 years younger than all other in-patient hospital RNs (49.0 years) and 5.2 years younger than the average age of nurses working in NYS outside of in-patient hospitals. The second bar chart shows that the average nursing experience of in-patient hospital staff nurses is 6 years less than the average career experience of nurse managers (15.8 years vs. 21.8 years), 7.4 years less than all other in-patient hospital RNs, and 5.3 years less than the average years of experience of all other NYS RNs (21.1 years).

The third bar chart compares these four groups in terms of the average calendar year in which they attained their basic nursing preparation degrees. These findings are consistent with the age and experience data already described. For in-patient hospital staff nurses' average year of graduation was 1985, 6 years later than the average year of graduation of RN managers, 8 years later than the "other" group of in-patient hospital RNs, and 6 years later than the average year of graduation of NYS RNs working outside of in-patient hospitals.

Figure 5
Percent of RNs Falling within Different Age Categories: NYS In-Patient Hospital Staff RNs, Nurse Managers, and All Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS

Percent of RNs Within Each Age Category

Legend: In-Patient Hospital Staff RNs; In-Patient Hospital Nurse Managers; All Other In-Patient Hospital RNs; All Other RNs Working in NYS

Age Category	In-Patient Hospital Staff RNs	In-Patient Hospital Nurse Managers	All Other In-Patient Hospital RNs	All Other RNs Working in NYS
Under 30	10.5	2.7	0.7	2.3
30 - 39	24.7	11.6	12.5	14.7
40 - 49	37.1	47.3	39.6	36.5
50 - 59	22	30.4	35	33.8
60 and Up	5.7	8	12	12.6

Figure 5 displays the shapes of the age distributions of these four groups of RNs. The shape of the in-patient hospital staff nurse age distribution, with its preponderance of younger RNs, is clearly "skewed" in the opposite direction from the age distributions of the generally older in-patient hospital nurse managers and the older-yet comparison groups of "other RNs" working in in-patient hospitals and "other RNs" working in different settings.

The under-30 bars in the Figure 5 bar chart indicate that in-patient hospital staff nurses are *four times more likely to be under 30 years of age* than are other RNs. In contrast, they are only half as likely to be over 60 years of age than are the two large comparison groups of "other RNs," those working inside and those working outside of in-patient hospital facilities. The percentage of nurse managers under 60 years of age falls between these extremes.

Nurse managers and the "other" group of in-patient hospital RNs, like the majority of RNs (who are working outside of in-patient hospitals), have relatively few representatives less than 40 years of age. Only 14.3 percent of nurse managers are under 40 years of age, compared with 13.2 percent of "other" in-patient hospital nurses, and 17 percent of the comparison group of "other RNs." In stark contrast, 35.2 percent of in-patient hospital staff RNs are under 40 years of age. These age-distribution relationships are of course dramatically reversed when looking at the "older" or opposite tail of the age distribution. Only 27.7 percent of in-patient staff RNs, for example, are 50 years old or older, while 47 percent of the "other" group of in-patient hospital RNs and 46.4 percent of RNs not working in in-patient hospitals are 50 years of age or older. The percentage of nurse managers 50 years or older (38.4 percent) falls between the younger group of staff nurses and the two "older" comparison groups.

Figure 6
For Each of Five Age Categories, Percentage of All Working NYS RNs
Who Are In-Patient Hospital Staff RNs
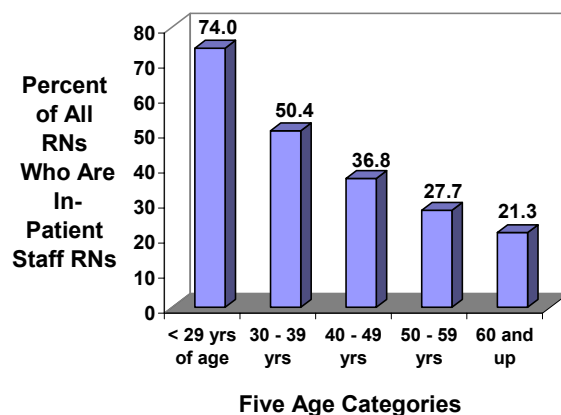
The quantitative data shown in Figure 6 plainly demonstrates that, for the majority of RNs today, a nursing career begins with employment experience as an in-patient hospital staff RN. Almost three quarters (74 percent) of all RNs working in New York State under 29 years of age today currently work in in-patient hospital-based settings as staff nurses. This data bolsters anecdotal accounts that nurses tend to begin their careers as in-patient staff nurses in hospitals, but given sufficient experience and credentials, either migrate to less stressful employment in nursing – or even leave the profession altogether at a premature age. Typically, this occurs once they find they no longer have the energy to work 16-hour shifts or 10-day rotations, or to cope with

other stressors frequently associated with such jobs. The heart-felt letters sent back to us along with the completed surveys described just such "progressions" out of in-patient hospital staff nursing.

Stage in Life Cycle Issues

Since the majority of RNs under the age of 40 work as in-patient hospital staff nurses, these RNs are also more likely to have children living at home with them compared to other RNs working in New York State. Figure 7 shows the status as child caregivers of each of the four comparison groups of RNs – in-patient hospital staff RNs, managers, all other in-patient hospital RNs, and all other RNs working in NYS outside of the in-patient hospital setting. Percentages are shown both for children of all ages living at home and also, more specifically, for children under the age of six.

The data in Figure 7 shows that in-patient hospital staff nurses are significantly more likely to have children living at home with them than are other RNs in NYS. Almost sixty percent of in-patient staff nurses have children living at home with them, as do a similar percentage of nurse managers. If we restrict our focus to those in the child-bearing stage of the life cycle (with children under six years of age), it is noteworthy that in-patient staff nurses are almost twice as likely to have children at home under six years of age as are their managers or RNs working outside of the in-patient hospital setting.

Figure 7
Status of Having "Children at Home" and "Children at Home Under Age Six":
In-Patient Hospital Staff RNs, Nurse Managers and "Other" In-Patient
Hospital RNs Compared to All Other RNs Working in NYS

Children at Home,
All Children and Children Under Age Six
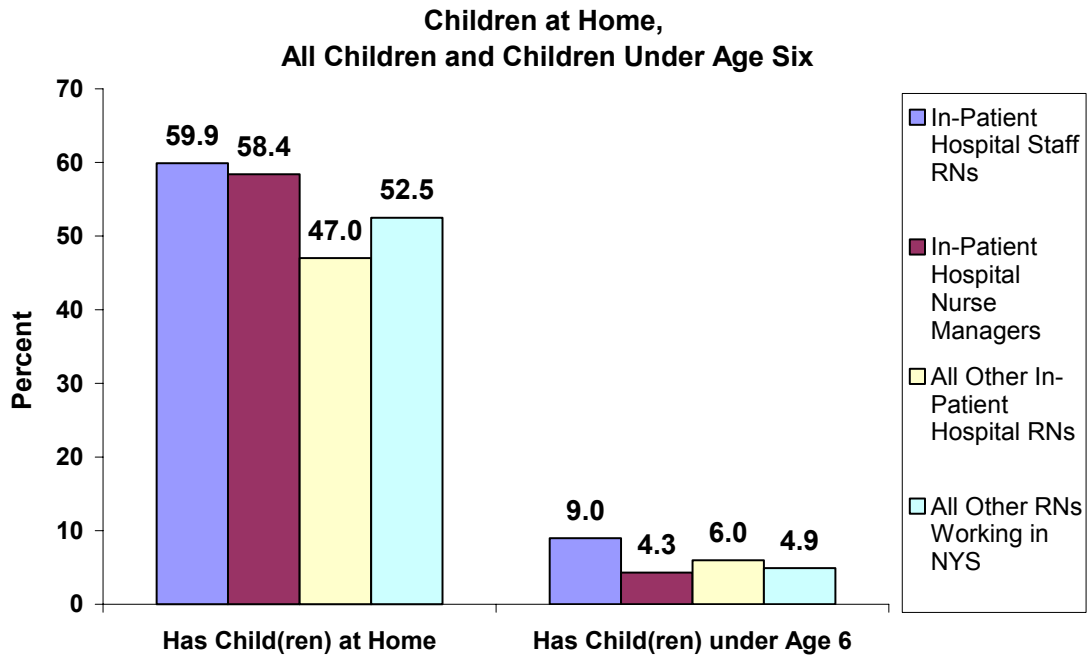
For these nurses in the child-rearing stages of the life cycle, childcare and family life concerns are therefore major quality-of-work-life issues. Many of the letters sent in with the completed surveys gave anecdotal accounts of RNs forced to leave employment in hospitals, or even the nursing profession, because nursing employers and employment settings could not (or would not) accommodate their special needs as working parents.

EDUCATIONAL PLANS AND ATTAINMENTS

Figure 8 compares the highest level of educational attainment for three groups of nurses working within in-patient hospital settings and a "comparison group" of all other NYS nurses (not working in in-patient hospitals). The bars in the chart represent the percentages of nurses within each group for whom "diploma," "associate's," "bachelor's" or "master's" is the highest educational degree they have attained. The first three of each four-bar set represent the three groups of RNs who were currently working in NYS in-patient hospitals – staff nurses, nurse managers, and all other RNs working in in-patient hospitals, in that order. The fourth bar in each four-bar comparison set represents all RNs currently working in NYS who are *not* working in in-patient hospitals.

For three of the four different job title categories represented by the bars – in-patient hospital staff nurses, in-patient hospital nurse managers, and the comparison group of "other RNs" not working within the in-patient hospital setting – the highest bar for the job title category is the "bachelor's" degree bar, meaning that RNs with job titles falling within these three categories have more frequently attained a "bachelor's" level of education than any other level. In other words, a bachelor's level of education is currently the "modal" (i.e., most frequent) level of education for the great majority of RNs working in NYS, both inside and outside of the in-patient hospital setting. The only exception is the relatively small group of RNs working within the in-patient hospital setting in job titles other than "staff nurse" or "nurse manager." The modal level of educational attainment for that group of largely specialized nurses (see Figure 3) is a master's or higher degree (49.0 percent).

Additional useful information is obtained from Figure 8 by looking at the relative bar height for each job title category within each "highest degree attained" four-bar grouping – "diploma," "associate's," "bachelor's" and "master's (& up)." The first histogram grouping, titled "diploma," indicates that 17 percent of the "All Other RN" group have a "diploma" as their highest degree. In contrast, only 12.4 percent of staff nurses, 9.8 percent of nurse managers and 9.1 percent of other RNs in in-patient hospitals hold the diploma credential as their highest educational degree.

Since diploma preparation programs have been largely phased out, the average RN who obtained a diploma as her/his highest degree is considerably older than other RNs. The finding that most diploma-only holders are no longer working in in-patient hospitals is consistent with the finding that older nurses are much less likely than younger nurses to be working in an in-patient hospital setting.

The second set of bars, representing nurses whose highest degree is an associate's degree, shows that proportionally, associates' degree holders are better represented among in-patient hospital staff nurses (34.7 percent) than in any of the other three title/setting groups. Nurse managers and other in-patient hospital RNs in contrast are much less likely to hold only an associate's degree (21 percent and 10.3 percent respectively). The percentage of nurses outside of in-patient hospitals holding (only) an associate's degree was 28.9 percent, somewhat less than the 34.7 percent of in-patient hospital staff nurses holding only an associate's degree.

Figure 8
Highest Degree Attained: In-Patient Hospital Staff RNs, Nurse Managers, and "Other" In-Patient Hospital RNs Compared to All Other RNs Working in NYS
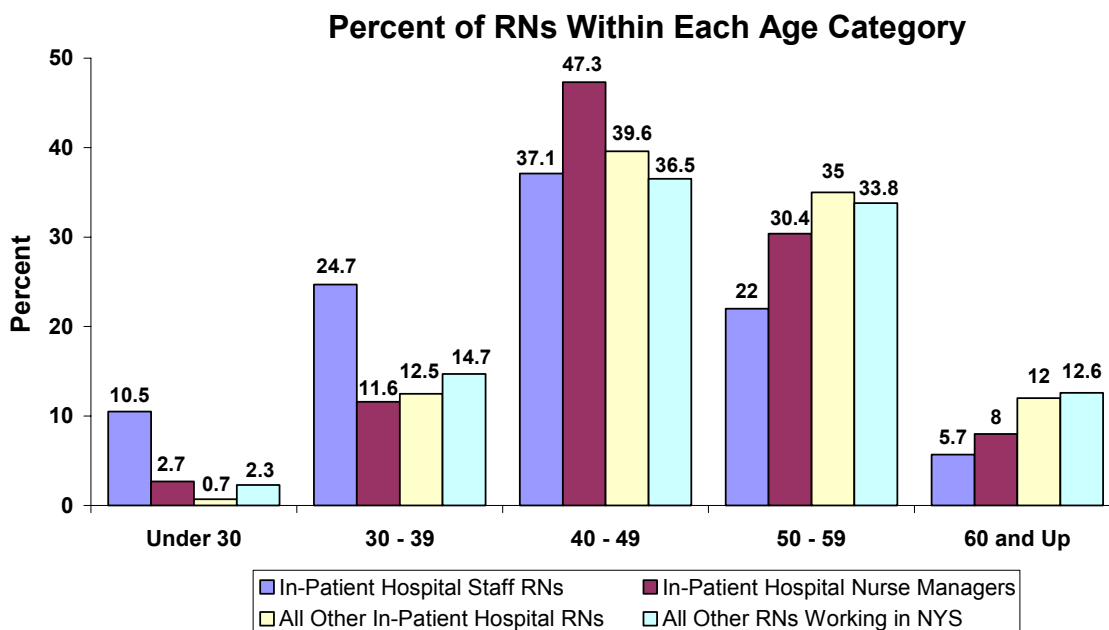
Highest Educational Degree Attained
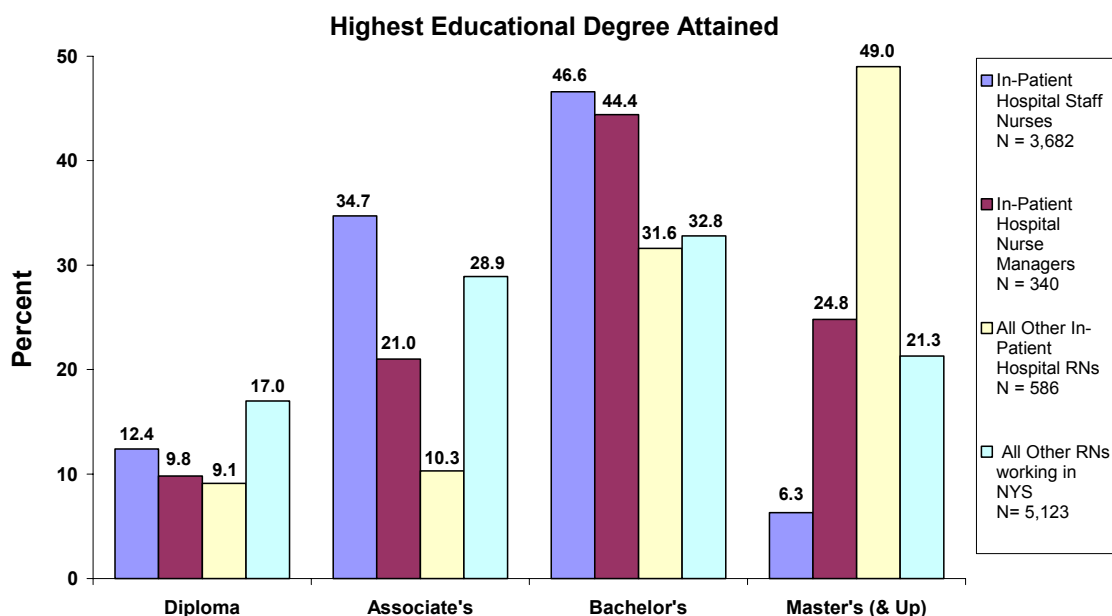
a. Bar percents for the same job title category (i.e. same color bars) add to 100

The third set of bars shown in Figure 8 represent the percentages of nurses within each of the four groups whose highest level degree in nursing is a bachelor's degree. The highest bar in the set represents the 46.6 percent of in-patient hospital staff nurses whose highest-level degree is the bachelor's. No other group has such large proportional representation by "bachelor's-only," RNs (though in-patient hospital nurse managers come close, with 44.4 percent representation). Multiplying the percentages by the group population Ns shows that more than half of all "bachelor's – only" RNs work as in-patient hospital staff RNs, even though this group is only a little more than a third of all the RNs working in New York State.

The fourth set of bars illustrates the sharp educational disparity between these four groups of RNs, particularly between in-patient hospital staff RNs and all other RNs. Only 6.3 percent of in-patient hospital staff nurses hold master's (and/or higher) degrees, while 24.8 percent of nurse managers have master's or higher degrees, and 49.0 percent of all other in-patient hospital RNs have master's or higher degrees. Of the remaining RN population, 21.3 percent have masters or higher degrees. In-patient hospital staff RNs, therefore, have master's degrees only one fourth as often as their managers, and also only one fourth as often as all other RNs combined. The "other" category of remaining RNs working within in-patient hospitals is an exceptionally well-educated group of nurses, with nearly half holding master's or higher degrees. These "other" nurses working in in-patient hospitals are twice as likely to hold master's (plus) degrees as nurse managers, and *nearly eight times more likely to hold master's (plus) degrees* than are staff nurses working in the same in-patient hospital setting.

Plans for Additional Degrees

In Figure 9 we once again compare the four groups – in-patient hospital staff RNs, nurse managers, all other in-patient hospital RNs and all other RNs working as nurses in NYS – in terms of their history of additional-degree attainment as well as their plans to earn additional degrees in the future. The percentages reported in each instance represent the percent (of each comparison group) who *did attain* or *plan to attain* the additional credential; the complement (i.e., the percentage *not* choosing to do so) is the remaining percentage balance – which would add to 100 percent if added to a particular bar.

Figure 9

Percentages of RNs Who Have Already Earned Additional Degrees and Who Plan to Earn Additional Degrees: NYS In-Patient Hospital Staff RNs, Nurse Managers, and "Other" In-Patient Hospital RNs Compared to All Other RNs Working in NYS
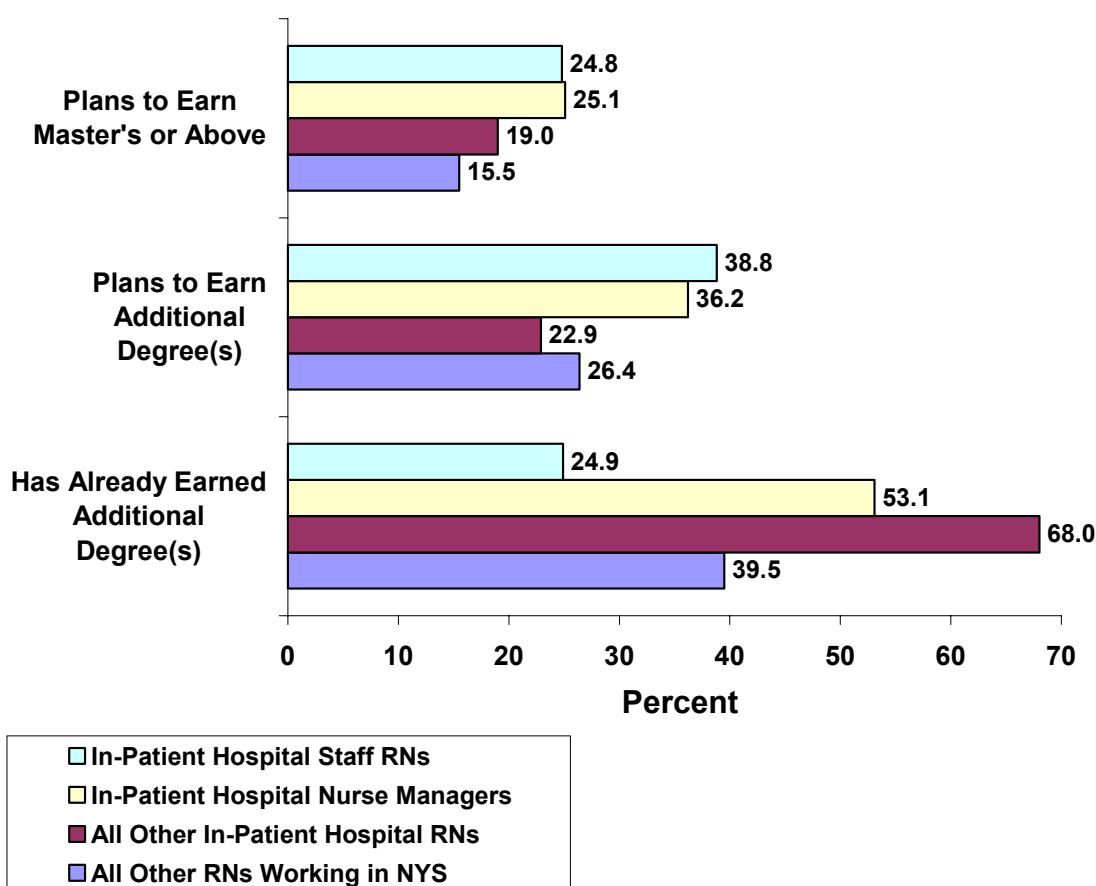
The bottom set of four bars in Figure 9 shows the percentage of nurses within each of the four groups who report having already earned an additional degree since completing their basic nursing preparation. Only 24.9 percent of in-patient hospital staff RNs report having done so, a figure only half as large as the percentage of nurse managers who have done so (53.1 percent). Corresponding with the data presented in

Figure 8 showing that the heterogeneous job title group of "other" in-patient hospital RNs are the most highly educated, more than two thirds of that group (68.0 percent) report having earned obtained an additional degree. RN respondents working outside of the in-patient hospital setting reported having earned additional degrees less frequently (39.5 percent) than the more highly educated "nurse manager" and "other in-patient hospital RN" groups, but nevertheless with 50 percent greater frequency than in-patient hospital staff RNs (24.9 percent).

The histogram positioned in the middle of Figure 9 compares the same four groups by their plans to earn an additional degree in the future. In this case, the bar representing in-patient hospital staff RNs is the longest, indicating that a higher percentage (38.8 percent) of these nurses plan to earn an additional degree than any of the other three groups (although nearly as great a percentage of nurse managers plans to earn an additional degree). A major reason why nurses in the other three groups are less likely to earn an additional degree is that they are more likely to have already done so, as described above.

The top-most histogram compares the four groups on the percentages planning to earn, not just any additional degree, but more specifically a master's (or higher level) degree. All three in-patient hospital RN comparison groups – staff RNs (24.8 percent), managers (25.1 percent) and others (19.0 percent) – report intending to earn a masters or higher degree with significantly greater frequency than the comparison group of NYS RNs not working within the in-patient hospital setting (15.5 percent). What is most striking about this finding is that nurse managers (24.8 percent) and "other" in-patient hospital RNs (49.0 percent) had already earned master's degrees with significantly greater frequency than the comparison group of RNs working outside of the in-patient hospital setting (21.3 percent, see Figure 8 above); nevertheless, those two already highly educated groups of in-patient hospital RNs still intend to pursue master's or higher degrees with greater frequency than RNs working outside of in-patient hospitals.

Taken together, Figures 8 and 9 show that in-patient hospital staff RNs are over-represented at the bachelor's level of education among NYS RNs, but have attained master's (and higher) degrees with much less frequency than other RNs in the State. On the other hand, in-patient hospital staff RNs are 50 percent more likely to be planning on attaining a master's (+) degree (or any other degree), compared to RNs working outside of in-patient hospitals.

This profile of educational attainment and plans of in-patient hospital staff RNs is most likely related to their younger age, on the average, than other working RNs. The competitive wages of in-patient hospitals allows them to attract a greater percentage of RNs with bachelor's degrees to work as in-patient staff nurses than are working as RNs outside of in-patient hospitals. These RNs, while working as staff nurses, then plan on additional degree(s) with 50 percent greater frequency than do RNs working in other settings. Once staff nurses have attained master's degrees, however, they often move to different RN job titles, either inside or outside of the in-patient hospital setting.

REASONS FOR NOT PURSUING FURTHER EDUCATION

One of the sample survey questions provided respondents a check-off list of 19 possible reasons for why they did not intend to pursue additional educational degrees. Those respondents who indicated no plans to pursue additional degrees (in the field of nursing) were then asked to identify the three most important reasons for that decision and to rank them in importance. Three of the 19 possible reasons for not pursuing educational plans were selected as the #1 ranked reason much more frequently than any others. The percentages of in-patient hospital staff RNs, nurse managers, "other" in-patient hospital RNs and all other RNs working in NYS that selected each of these reasons as their #1 reason are shown in Figure 10.

Figure 10

Top Three Reasons for Not Pursuing Further Education[a]: In-Patient Hospital Staff RNs, Nurse Managers and All Other In-Patient Hospital RNs Compared to All Other RNs Currently Working in New York State

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Top Three Reasons Cited for not Pursuing Further Educational Degrees: Percent of RNs Selecting Reason as #1 Reason (out of 19 choices)

Three Reasons Most Often Selected as #1 Reason (out of 19 choices)

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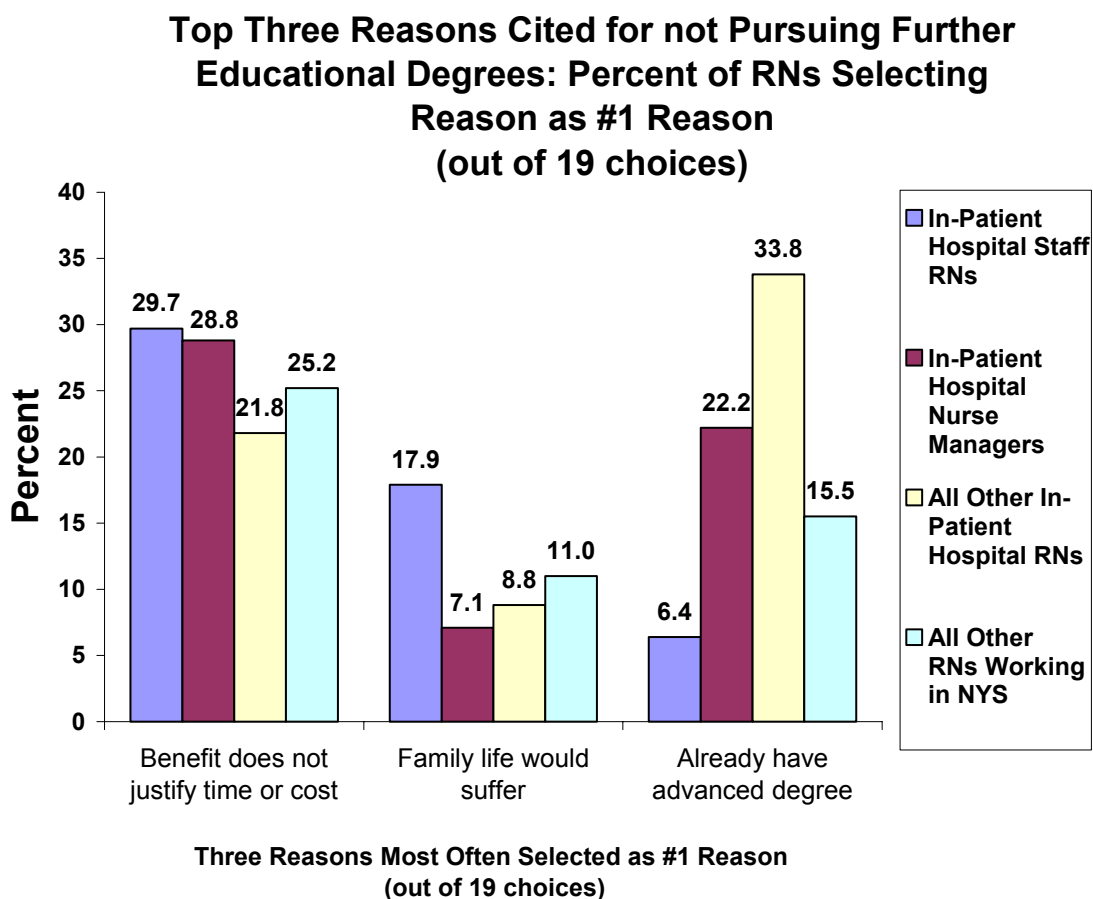
[a]Respondents not pursuing further educational degrees were asked to select from 19 reasons presented their top ranked reason for having no further educational plans. The three reasons shown in the bar chart were the most popular #1 reasons among all RNs.

The reason selected more frequently than any other by all RNs working in New York State for not continuing their education further (selected as #1 by 26.6 percent) was "benefit does not justify tuition or time cost." This reason was selected by comparable percentages of in-patient hospital staff RNs (29.7 percent) and of nurse managers (28.7 percent). It was selected by a somewhat lower percentage of the comparison group of "other" in-patient hospital RNs (21.8 percent) – primarily because that group more often selected "already have earned an advanced degree." The fourth comparison group – NYS RNs working outside of the in-patient hospital setting – also selected this reason with somewhat less frequency (25.2 percent) than staff nurses and nurse managers, most likely because that group tended to more frequently select "I am too old," a reason not included among the "top three" reasons.

Significant differences between the four groups emerge when looking at the percentages that selected "family life would suffer" as their #1 ranked reason. In-patient hospital staff RNs ranked this reason first 17.9 percent of the time, compared to 7.2 percent of nurse managers, 8.8 percent of "other" in-patient hospital RNs and 11.0 percent of all other RNs working in New York State. The much larger percentage of in-patient hospital staff RNs according "family" their #1 ranking corresponds with the finding presented in Figure 7 that this group is significantly more likely to have children living at home with them than are other RNs, and are much more likely to have children under age six living at home with them.

Not surprisingly, given the educational degree attainment data presented in Figures 8 and 9, only 6.4 percent of in-patient hospital staff RNs indicated that "I have already attained an advanced degree" as their reason for not pursuing additional education – far less than the comparison figures for the three other groups of RNs (22.2 percent of nurse managers, 33.8 percent of "other" in-patient hospital RNs and 15.5 percent of other RNs working in NYS). As shown above (Figure 8), only 6.3 percent of in-patient hospital staff nurses have already earned a master's (or higher) degree, compared to 24.8 percent of nurse managers, 49.0 percent of "other" in-patient hospital RNs and 21.3 percent of all other RNs working in NYS.

COHORTS OF RN GRADUATES BY DECADE OF GRADUATION COMPARED

Table 2 summarizes important information about the changing profile of nurse graduates decade by decade since the 1960's. The data in Table 2 also compares, within each cohort of graduates, those currently working as in-patient hospital staff RNs, those working as nurse managers, those working in "other" in-patient hospital RN positions, and those RNs working in NYS but not within in-patient hospital settings. These comparisons reveal telling shifts over time in the educational profiles of in-patient hospital RNs as compared to RNs working outside these hospital settings.

The "Age Finished Basic RN Preparation" column of data, for example, corroborates the increased average age of nursing graduates from nursing preparation programs over the past four decades. In the 1960's the average age of an RN completing their basic nursing preparation was 21.5 years of age; in the 1970's it was 23.3 years; in the 1980's it was 26.3 years and in the 1990's it was 31.5. For the 2000's

data available through October 2002, the average age of RNs completing their basic preparation was 30.9 years of age.

Careful scrutiny of these decade-specific trends among the four comparison groups reveals generally negligible age differences in their average age of completing their basic nursing preparation during the 1960's and 1970's. By the1980's, subtle but statistically significant age differences emerged – between 1980's graduates reporting working as in-patient staff nurses and those 1980's graduates reporting working in other capacities. In that decade, nurses currently working as in-patient hospital staff nurses report graduating, on average, at the age of 25.6, nurse managers at the age of 26.0, "other" in-patient hospital RNs at the age of 26.5, and the large comparison group of "all other RNs" at the age of 26.7.

The modest 1.1 year average age differential observed between current in-patient staff nurses and the "other, not in-patient hospital" category of nurses at their age of graduation (during the 1980's) further increased during the 1990's and 2000's. During the 1990's for example, nurses currently working as in-patient staff nurses reported being 2.2 years younger at the age of graduation, on average, than the group of "other, not in-patient hospital" RNs; but, by the 2000's they reported being a very substantial 6.8 years younger, on average, than the age of that "other" group of RNs at the time of graduation.[3]

The 263 respondents who reported graduating in the 2000's and working as NYS in-patient staff nurses were 29.0 years old on average when they graduated from their RN program. The comparison group of 99 RNs who graduated in the 2000's and reported working in any other setting had an average age at graduation of 35.8 years. Moreover, most of these nurses are still in their "first RN job." Thus, this very substantial age difference at graduation between the two groups definitely reflects a difference in the population of nurses taking jobs as in-patient staff nurses after graduation compared to the population of nurses taking different kinds of jobs.[4]

Similar and related patterns of sample-survey findings emerge when looking at the right-hand side of Table 2. The first noteworthy trend is seen in the momentous basic-education shift from the diploma credential in the 1960's to the associate's degree in the 2000's. Among the survey respondents, 71.4 percent of working NYS RNs, who graduated in the 1960's, graduated from a hospital-affiliated three-year diploma nursing program; only 14.3 percent graduated from a two-year associate's program. In contrast, 61.3 percent of RNs working in NYS, who graduated in the 2000's, graduated from associate's programs and only 1.4 percent graduated from the largely discontinued diploma programs.

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[3] Because data was only available for a little less than three years of RN "graduations" during the 2000's, the size of the population for analysis was smaller, but still sufficiently large to confirm the significance of this result above the .000 level of certainty.

[4] Because nurses generally are required to have years of experience before being promoted to "nurse managers," the 2000's graduate data included only 1 nurse manager, so data for a "nurse manager" group could not be included in the analysis.

Table 2
Age Finished Degree, Years of Experience, Current Age, and Degree Obtained for Basic RN Preparation by Decade Basic RN Preparation was Completed

Decade Finished Basic Nursing Preparation	N	Col. %	Average Years or Age				Percent of RNs with Basic RN Preparation Degree			
			Age Finished Basic RN Preparation[e]	Years Experience as RN	Years in Current Job	Current Age[a]	Diploma	Associate's	Bachelor's & Up	Row %
1960s										
In-Patient Hospital Staff Nurse	338	24.7	21.5	32.9	20.6	57.7	72.6	15.1	12.3	100
In-Patient Hospital Nurse Manager	34	2.5	21.4	33.4	18.7	57.2	74.2	3.2	22.6	100
All Other In-Patient Hospital RNs	107	7.8	21.6	34.6	12.7	58.3	77.7	6.4	16.0	100
All Other RNs Working in NYS	890	65.0	21.5	32.8	11.8	58.2	70.2	15.4	14.4	100
Total: All RNs Working in NYS	1,369	100	*21.5*	*32.9*	*14.2*	*58.0*	*71.4*	*14.3*	*14.2*	*100*
Eta =			.014[d]	.074[d]	.384	.073[d]	Contingency Coefficient = .093[d]			
1970s										
In-Patient Hospital Staff Nurse	732	26.6	23.4	24.7	15.7	49.9	35.1	36.0	28.9	100
In-Patient Hospital Nurse Manager	140	5.0	23.0	25.8	14.4	49.8	34.5	38.7	26.9	100
All Other In-Patient Hospital RNs	217	7.9	22.7	25.6	9.7	49.8	32.2	32.2	35.6	100
All Other RNs Working in NYS	1,664	60.4	23.3	25.6	9.2	50.5	34.2	38.5	27.3	100
Total: All RNs Working in NYS	2,753	100	*23.3*	*25.3*	*11.2*	*50.2*	*34.3*	*37.3*	*28.4*	*100*
Eta =			.044[d]	.087	.348	.061[d]	Contingency Coefficient = .054[d]			
1980s										
In-Patient Hospital Staff Nurse	1,129	40.2	25.6	16.8	11.4	43.3	14.4	44.3	41.4	100
In-Patient Hospital Nurse Manager	101	3.6	26.0	18.2	9.0	44.5	10.5	45.3	44.2	100
All Other In-Patient Hospital RNs	173	6.2	26.5	17.8	7.6	44.8	10.0	39.3	50.7	100
All Other RNs Working in NYS	1,403	50.0	26.7	17.0	7.0	44.6	12.0	53.4	34.6	100
Total: All RNs Working in NYS	2,806	100	*26.3*	*17.0*	*8.9*	*44.1*	*12.8*	*48.6*	*38.6*	*100*
Eta =			.089	.069	.342	.101	Contingency Coefficient = .109			
1990s										
In-Patient Hospital Staff Nurse	1,159	50.7	30.5	6.8	4.9	37.6	3.2	65.2	31.6	100
In-Patient Hospital Nurse Manager	52	2.3	31.5	8.0	4.0	39.5	1.9	67.3	30.8	100
All Other In-Patient Hospital RNs	77	3.4	31.2	8.2	3.3	39.2	4.2	52.8	43.1	100
All Other RNs Working in NYS	999	43.7	32.7	7.5	3.9	40.5	5.3	67.9	26.8	100
Total: All RNs Working in NYS	2,287	100	*31.5*	*7.2*	*4.4*	*39.0*	*4.1*	*66.0*	*29.9*	*100*
Eta =			.125	.134	.169	.155	Contingency Coefficient = .088			
2000s[a]										
In-Patient Hospital Staff Nurse	263	72.5	29.0	1.5	1.4	30.5	1.6	54.3	44.2	100
In-Patient Hospital Nurse Manager	1[b]	0.0	***	***	***	***	***	***	***	***
All Other In-Patient Hospital RNs	0[b]	0.0	***	***	***	***	***	***	***	***
All Other RNs Working in NYS	99	27.3	35.8	1.4	1.2	37.2	1.1	80.6	18.3	100
Total: All RNs Working in NYS	363	100	*30.9*	*1.5*	*1.3*	*32.3*	*1.4*	*61.3*	*37.4*	*100*
Eta =			.350	.050[d]	.098[d]	.331	Contingency Coefficient = .233			

[a]Current age is age when nurse survey was completed, approximately mid-October 2002, and "2000s" "Decade Finished Basic Nursing Preparation" also only includes RNs who finished their basic nursing preparation (and licensure) through mid-October 2002.

[b]Insufficient Ns to include In-Patient Hospital Nurse Manager and All Other In-Patient Hospital RNs groups in the analyses for the "2000s" decade.

[c]Contingency coefficient statistic corresponds roughly to the correlation coefficient (and eta) statistic, with possible values ranging from 0 to 1. In this case, the contingency coefficient is a measure of the strength of the association between which job title group a nurse belongs to, and what basic nursing preparation a nurse received.

[d]Not significant above .01 level.

[e]For earlier decades, the average age of finishing basic nursing preparation figures are probably somewhat depressed by the lack of inclusion in these sample Ns of RNs who graduated at older ages and have subsequently retired. This analysis was limited to RNs who were working in NYS.

Erosion in the percentage "share" of basic RN degrees going to diploma recipients (71.4 percent in the 1960's) was offset, in subsequent decades, by increased percentages of all basic RN credentials going to associate's degree and baccalaureate recipients. Thus, the bachelor's share of the basic degree pool rose from 14 percent during the 1960's to 37 percent in the early 2000's – a 23 percentage point growth. However, the growth in the associate's degree recipient pool has been more than twice as large in percentage terms – rising from a 14 percent share in the 1960's to 61 percent share in the current decade, a 47 percentage-point shift. In short, the rechanneling of basic degree recipients away from the 1960's diploma program to the associate's degree alternative has been far more pronounced than to bachelor's programs, i.e., a 47 percentage point growth vs. 23 percentage point growth. Table 2 also shows that these patterns of change are true overall for each of the four groups of RNs being compared – in-patient hospital staff RNs, their managers, all other in-patient hospital RNs, and all other RNs now working in NYS.

CHANGES OVER TIME IN PATTERNS OF "DEGREE SHIFTING" BY TITLE AND SETTING

Beginning in the 1980's however, a more subtle but important trend begins to emerge. Table 2 clearly reveals that, among 1980's RN graduates, far greater percentages of each of the three in-patient hospital RN comparison groups began their careers with bachelor's degrees (41.4 percent of staff RNs, 44.2 percent of nurse managers and 50.7 percent of the "other" in-patient hospital RNs), compared to the percentage of 1980's RN graduates working outside of the in-patient hospital setting who began their careers with bachelor's degrees (34.6 percent).

This divergence in the basic education credential between nurses working in in-patient hospitals and nurses working in all other settings continued through the 1990's and into the 2000's. The data for 2000's graduates for example (through September 2002) shows that in-patient hospital staff nurses appear to be graduating almost 2 ½ times more frequently from bachelor's programs than nurses currently working outside of in-patient hospitals (44 percent vs. 18 percent).

Furthermore, the 44 percent of in-patient hospital staff nurses graduating in the 2000's who reported having started their careers with bachelor's degrees represents a prodigious 90 percent of all RNs graduating with bachelor's degrees in the 2000's. As the percentage of RNs graduating with a Baccalaureate degree has diminished over the past decade, the hospital-based sector has managed to continue to employ 30 to 40 percent of its staff nurses with a bachelor's degree as their basic educational credential. To maintain such a sizeable percentage of bachelor's graduates among hospital staff nurses, over the decades the hospital sector has hired ever-greater percentages of all the bachelor's RN graduates. If the gap between associate's and bachelor's graduates continues to widen, as it has in recent decades, then it may no longer be possible for the hospital sector to maintain a 30 to 40 percent level of representation of bachelor's RN graduates among their staff RNs.

Figure 11

Decade 2000's RN Graduates' Average Age by Basic Preparation Degrees (Associate's or Bachelor's and up) and Percentages by Basic Preparation Degree Holding Different Job Titles: In-Patient Hospital Staff RNs Compared to All Other RNs Working in NYS[a]

January 2000 to September 2003 RN Graduates: Age Upon Graduation by Basic RN Degree

- In-Patient Hospital Staff RNs (N = 253)
- All Other RNs currently working in NYS (N = 90)

January 2000 to September 2003 RN Graduates: Percentages Currently in Different Job Titles by Basic RN Degree

- In-Patient Hospital Staff RNs (N = 253)
- All Other RNs currently working in NYS (N = 90)
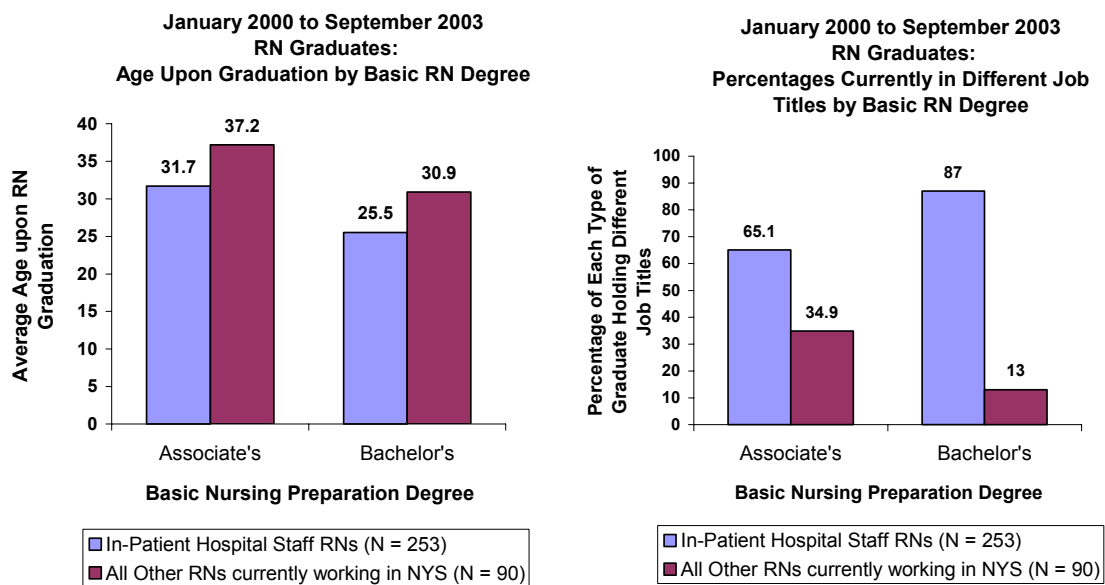
[a]For 2000's graduate respondent data, there is only one nurse manager, and no "other" in-patient hospital RN employees, so these categories are not included in the analysis. Nurse managers and "other" in-patient hospital RN employee positions apparently require more experience and training than our respondents who graduated between 2000 and September 2002 possessed at the time they were survey in October 2002.

The bar chart displayed on the right-hand side of Figure 11 above shows that for 2000's RN graduates, 87 percent of bachelor's graduates are currently working as in-patient hospital staff RNs, compared to only 65 percent of associate's graduates. Conversely, only 13 percent of bachelor's graduates are currently working outside of in-patient hospitals compared to 34.9 percent of associate's graduates.

The bar chart on the left in Figure 11 also shows that the average age of graduation from bachelor's programs is substantially younger than the comparison figure for graduates from associate's programs (for nurse's who graduated between January 2000 and September 2002).[5] In Chapter 3 of Volume I of this report, we noted that the average age for all associate's decade-2000 RN graduates was 33.6 years, while the average age for all bachelor's decade-2000 RN graduates was only 26.2 years. The bar chart in Figure 11 elaborates this finding still further for decade-2000's associate's and bachelor's graduates who report working either inside or outside of the in-patient hospital setting. The bars demonstrate that bachelor's graduates taking jobs either inside or outside of in-patient hospital settings are six years younger, on the average, than associate's graduates finding employment in the same type of setting. More striking, however, is the finding that for each type of degree-holder, associate's or

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[5] Volume I of this report documented how this divergence in age between associate's and Bachelor's graduates has been increasing over recent decades.

bachelor's, the average age of graduates working within in-patient hospitals is five years younger than the average age of same-degree graduates working in all other settings.

Earlier, in Table 2, we documented that all decade-2000's graduates currently working as in-patient staff nurses are, on the average, 6.8 years younger than all decade-2000's graduates working in other settings. This substantial average age difference is closely tied to the three additional trends discussed above for "decade-2000's" graduates, namely:

➢ bachelor's degree graduates work disproportionately more often as in-patient hospital staff nurses;

➢ bachelor's degree graduates are, on average, 7.4 years younger than associate's degree graduates; and,

➢ the younger graduates from either type of degree-granting program are more likely to be employed as in-patient hospital staff RNs.

THE EMERGENCE OF TWO WELL-DEFINED CAREER-ENTRY PATHWAYS

In Volume I of this report we concluded that two very different cadres of RN graduates have emerged in recent years – with potentially very significant consequences for the future of the nursing profession. The trend over recent decades has been for more and more entrants to the nursing profession to pursue the 2-year associate's degree route of entrée, and a smaller percentage of entrants choosing to complete a 4-year bachelor's program for their basic RN preparation. While the average age of both groups has increased over the years, the average age of associate's graduates has increased even more rapidly than that of bachelor's graduates. Before 1990 the average age difference between younger bachelor's graduates and older associate's graduates was 3.2 years; by the 2000's the average age difference between these groups had more than doubled to 7.4 years.

Volume I data demonstrated that bachelor's graduates are more than twice as likely as associate's graduates to have attained either a master's degree or to plan on obtaining one. The Volume I data also showed that bachelor's graduates are much more likely to pursue a career in in-patient hospital nursing than are associate's graduates. Part of the reason for this "differential career path" may be that some hospitals, especially in New York City, are more eager to hire bachelor's graduates, to fill crucial "specialist" RN roles within the hospital as they advance through their careers. In fact, the American Association of Critical Care Nurses (AACN) attributes at least part of the shortage of nurses with critical care training and certification to an insufficient number of bachelor's graduates entering the field of in-patient hospital staff nursing.

The description of the two diverging "cadres" of entrants into the nursing profession as a whole (described in Volume I) appears to mirror to a considerable degree the two different profiles of RN graduates entering the field of in-patient hospital staff nursing and those entering other areas of nursing. If the number of younger, bachelor's prepared RNs continues to diminish, the consequences will probably be even

more serious for in-patient hospitals, which are most reliant upon recruiting and investing training resources on these younger, more highly educated entrants to the profession, in order to have adequate numbers of staff with the specialized training to meet the needs of their more critically ill patients. The concern over the dwindling numbers of bachelor's prepared RNs was echoed in many of the notes and letters sent back with the completed surveys.

JOB LONGEVITY AMONG IN-PATIENT HOSPITAL STAFF NURSES

Table 2 underscored one other important pattern that differentiates in-patient hospital staff nurses from other nurses. The "Years in Current Job" column of that table demonstrated that for each "cohort" of graduates (except for the 2000's for obvious reasons), the average length of time in-patient hospital staff RNs had been employed in their current jobs was substantially longer than the length of time each of the other groups of nurses had remained in their current jobs (especially nurses employed outside of the in-patient hospital setting). This "current job longevity" data is displayed graphically in Figure 12 and shows that, regardless of the decade of graduation, nurses currently working as in-patient hospital staff nurses have, on average, remained in their current jobs substantially longer than nurses working in other capacities.

Figure 12
Average Years in Current Job by Decade of RN Graduation:
In-Patient Hospital Staff RNs, Nurse Managers & "Other" In-Patient
Hospital RNs Compared to All Other RNs Working in NYS

Average Number of Years in Current Job by Decade of RN Graduation
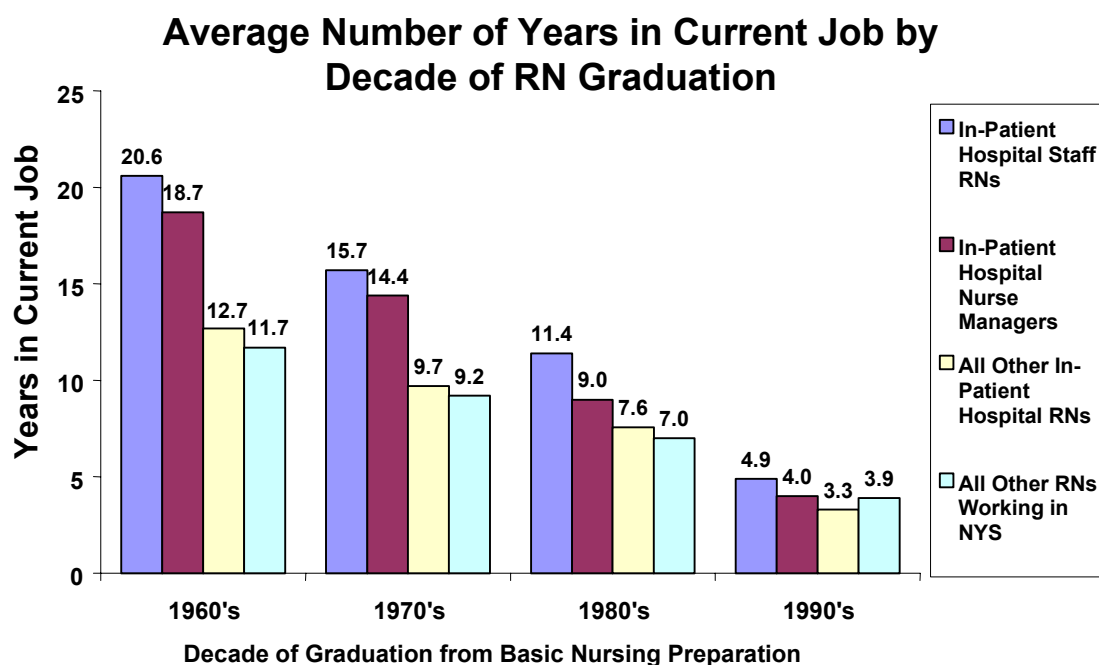
This job-longevity difference between in-patient hospital staff RNs and all other RNs becomes greater in magnitude among nurses graduating further back in time (probably because the increased period of time since graduation allows for greater differences among RNs in the length of time that they have held their current job). Nurses graduating in the 1990's and working as in-patient hospital staff RNs have held their current jobs, on the average, 25 percent longer than nurses working in other settings. In-patient hospital staff nurses graduating in the 1980's have stayed in their jobs 63 percent longer than RNs working outside the in-patient hospital setting, those graduating in the 1970's have worked in their jobs 71 percent longer, and those graduating in the 1960's have held their jobs 76 percent longer, on average, than nurses working in other settings.

The bar chart in Figure 13 presents data that permits further examination of this career-longevity difference for in-patient hospital staff RNs compared to other RNs, by examining the percentages of RNs within each job-title category and graduation cohort *whose current job is also their first job*. For this analysis, RNs were considered to be still working in their "first job," if the number of years they reported working within the

Figure 13

Percentage of RNs for whom Current Job is their First Job[a]:
In-Patient Hospital Staff RNs, Nurse Managers & All "Other"
In-Patient Hospital RNs Compared to All Other RNs Working in NYS

Percentage of RNs for whom Current Job
is their First Job by
Decade of RN Graduation
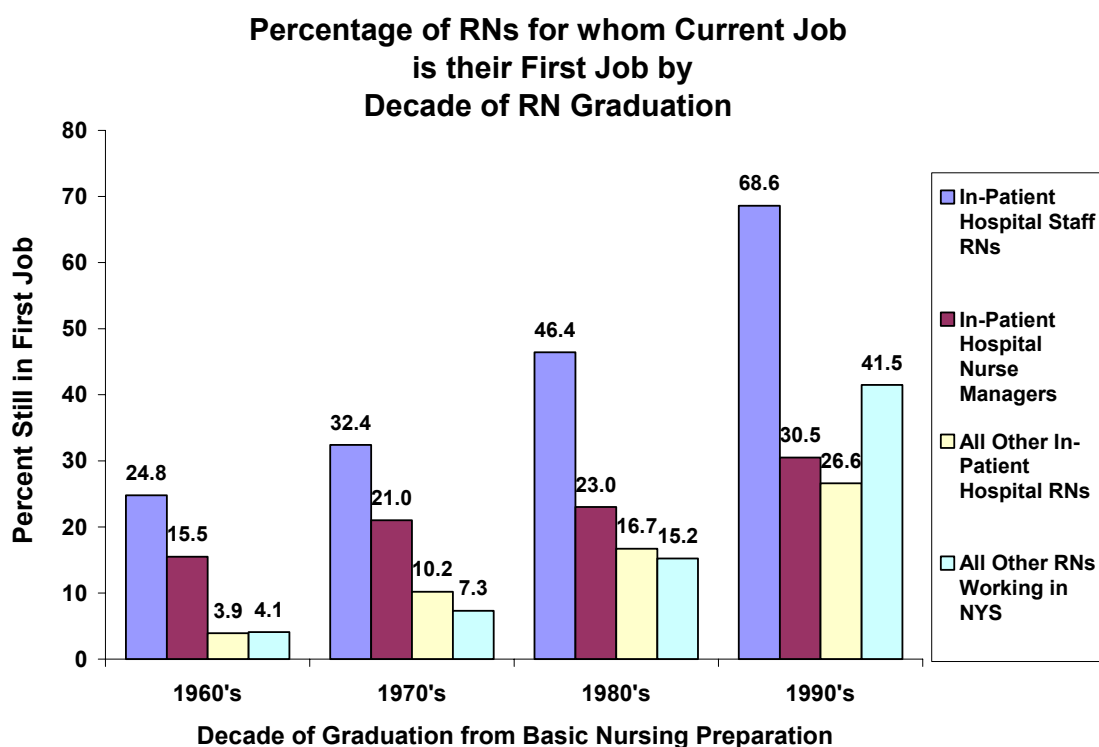
[a]"Current job" is defined as "first job" for this purpose if the response to "How long have you worked in this particular job?" (survey question 6) is equal to (within a two year "margin") the response to "How many years have you worked as an RN in the field of nursing?" (survey question 1).

nursing profession was within two years of the number of years they reported working within their current job.

The results of this analysis are striking. For 1990's, 1980's, 1970's and 1960's graduates respectively, in-patient hospital staff nurses were two thirds more likely, three times more likely, four times more likely, and six times more likely to still be working in their "first job" than were other RNs working outside of the in-patient hospital setting. Clearly, even though in-patient hospital staff nurses report being substantially more stressed and dissatisfied with their jobs than RNs in other job titles (see Chapters 2, 3 and 4 of Volume II), they choose to remain in their jobs for many more years, on average, than do other RNs.

A possible explanation for this apparent paradox is presented in Chapter 7 of Volume II: *RNs' Ratings of Factors Impacting Their Job Satisfaction*. Findings in that chapter demonstrate two things: first, that nurses whose self-reported #1 job priority is "level of compensation" are less satisfied than average with their jobs; and, secondly, that these same nurses also plan to remain in their jobs somewhat longer (on average) than more satisfied nurses expressing other job priorities. Many nurses sent letters to us explaining that, while stressed and dissatisfied in their current jobs as in-patient hospital staff nurses, family obligations required that they maintain a certain income level, and no other type of employment for which they were eligible could match their current income. As one nurse put it, she has "golden hand-cuffs."

MINORITY GROUP REPRESENTATION AMONG IN-PATIENT HOSPITAL STAFF RNS COMPARED TO OTHER NYS RNS

This Supplement has demonstrated that in-patient hospital staff nurses tend to be: a) considerably younger than other nurses; and b) far less likely to hold advanced degrees (master's and up) than their counterparts in non-hospital settings. A third demographic characteristic also sets this group of nurses apart – in-patient hospital staff nurses are almost twice as likely to belong to an ethnic minority group or to have been born outside of the United States than are nurses who do not work in in-patient hospital settings. They are also more than twice as likely to have been educated outside of the United States than are other RNs. Male RNs, a "minority group" in the field of nursing, are also found with substantially greater frequency among in-patient hospital staff RNs than in nursing jobs in other settings.

The bar chart in Figure 14 illustrates well the disproportionately high level of minority presence in the in-patient hospital staff nurse population when compared to RNs not working within in-patient hospitals. This disparity in minority representation is apparent in the heights of the first and the fourth bars in each grouping displayed. Thus, ethnic minority representation within in-patient hospitals is roughly double the

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Figure 14
RN Minority[a] Group Representation Within Four RN Populations:
NYS In-Patient Hospital Staff RNs, Nurse Managers and All Other In-Patient
Hospital RNs Compared to All Other RNs Working in NYS

Percentages of RNs in Different Job Titles Who Belong to Different Minority RN groups

	In-Patient Hospital Staff RNs	In-Patient Hospital Nurse Managers	All Other In-Patient Hospital RNs	All Other RNs Working in NYS
Ethnic Minority	32.1	23.1	19.0	18.2
Born outside U.S.	28.2	19.6	15.5	15.3
Trained outside U.S.	18.2	11.0	9.5	8.6
Male	6.5	9.3	7.1	4.1
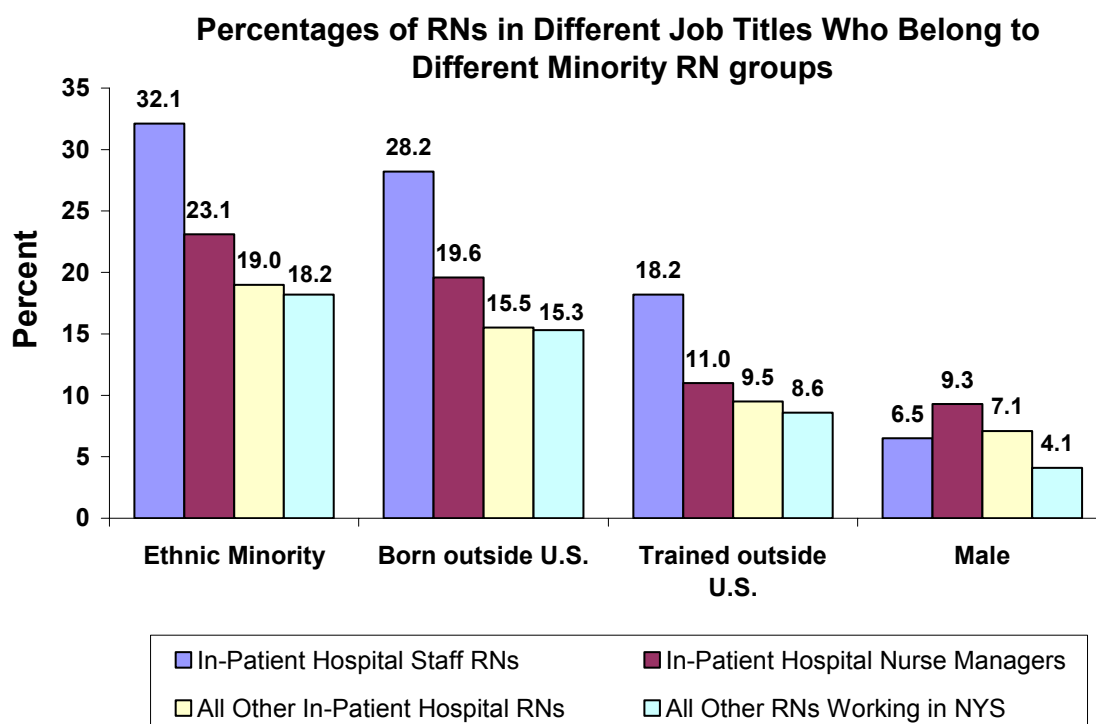
[a]For the purpose of this analysis, all respondents who selected a response other than "White, Non-Hispanic" are considered ethnic minority RNs.

minority representation seen in "all other" settings (32.1 percent vs. 18.2 percent). The same pattern is also reflected among nurses born and among nurses educated outside of the United States – groups that are roughly twice as likely proportionally to be employed as in-patient hospital staff RNs than to be employed in other settings.

This same pattern of overrepresentation of ethnic minority nurses, nurses born outside of the U.S., and nurses educated outside of the U.S. is also in evidence among in-patient hospital nurse managers – although the magnitude of overrepresentation is diminished. For the ethnic minority group, the born outside of the U.S. group, and the educated outside of the U.S. group, the percentage of representation is considerably lower among nurse managers than among the staff nurses they supervise. Nevertheless, for all three minority groupings, their representation among in-patient hospital nurse managers is somewhat higher than their representation among nurses working outside of in-patient hospitals. In contrast, the ethnic and non-U.S. born and non-U.S. educated minority groups are no better represented within the group of "other" in-patient hospital RNs than among nurses working outside of in-patient hospitals. (Generally this "other" group of in-patient hospital RNs is an older, more highly educated and more specialized group than staff nurses or nurse managers.)

The pattern of disproportionate minority group representation in the often lower-paying, lower-status and less-specialized in-patient staff nurse positions (in contrast to their lesser representation in the nurse manager or "other" in-patient hospital jobs) does not hold true for members of the "male" minority group. In fact, male nurses are represented with 40 percent greater frequency among nurse managers (9.3 percent) than among staff nurses (6.5 percent). They are also more highly represented among the more specialized and educated group of "other in-patient hospital RNs." Thus, while low overall male representation within the nursing profession may qualify them as a "minority" group statistically, as a group, they do not appear to be experiencing the marginalization that ethnic, non-U.S. born and non-U.S. educated RN minority groups may be experiencing.

The Overlapping Composition of Ethnic Minority, Non-U.S. Born and Non-U.S. Educated RNs

Three of the minority groups discussed above – ethnic minorities, RNs born outside the U.S., and RNs educated outside the U.S. – overlap to a very considerable degree. The extent and nature of this overlap is explored in the charts that follow. Most importantly, nearly 90 percent of those in-patient hospital staff RNs who identified themselves as born outside of the U.S. also identified themselves as belonging to an ethnic minority group. In a similar vein, RNs educated outside of the U.S. are almost entirely a sub-set of RNs born outside of the U.S., since only 0.1 percent of in-patient hospital staff nurses were born in the U.S. and educated in another country. A little over one third of RNs born in another country, however, were educated in this country.

In Figure 15, we can see that roughly one of every three RNs working as staff nurses within in-patient hospital settings identify themselves as members of an ethnic minority (32.1 percent), and the complement of that number, 67.9 percent, identify themselves ethnically as "White, Non-Hispanic."

Figure 15
Percentages of In-Patient Hospital Staff RNs Currently Working in NYS Who Identify themselves as "White, Non-Hispanic" or As Belonging to An Ethnic Minority Group[a].

All but a 3.5 percent portion of the 67.9 percent "White, Non-Hispanic" slice of the first pie chart (Figure 15) is included in the "White, U.S.-Born, U.S.-Educated" (64.4 percent) chunk of the second pie chart shown in Figure 16. The reason for this extraordinary degree of overlap is that the great majority (88.3 percent) of non-U.S. born and/or educated RNs identify themselves as belonging to an ethnic minority group. Therefore, except for the small group (3.5 percent) of "White, Non-Hispanics" born and/or educated outside of the U.S. – the three slices of the Figure 16 pie chart (U.S. born and educated ethnic minorities, non-U.S. born but U.S. educated RNs, and RNs both born and educated outside of the U.S.) correspond directly to the large (32.1 percent) ethnic minority slice of the first pie chart (Figure 15).

Figure 16

Percentages[a] of In-Patient Hospital Staff RNs Currently Working in NYS Who Identify Themselves as: 1) White, Non-Hispanic, U.S. Born and Educated, or as 2) Belonging to an Ethnic Minority Group[b] and U.S. Born and Educated, or as 3) Born outside the U.S.[c] but U.S. Eucated, or as 4) Born & Educated outside the U.S., or as 5) Educated outside U.S. but U.S. Born

17.8% Born and Educated outside U.S.

10.5% Born outside U.S., but U.S. Educated

7.1% Ethnic Minority U.S. Born & Educated

0.1% Educated outside U.S., but U.S. born

64.4% White, U.S. Born and Educated

- ☐ White, Non-Hispanic, U.S. Born & Educated (N = 2,296)
- ☐ Ethnic Minority, U.S. Born & Educated (N = 254)
- ☐ Born outside U.S. but U.S. Educated (N = 374)
- ☐ Born and Educated outside U.S. (N = 635)
- ☐ Educated outside U.S. but U.S. Born (N = 5)
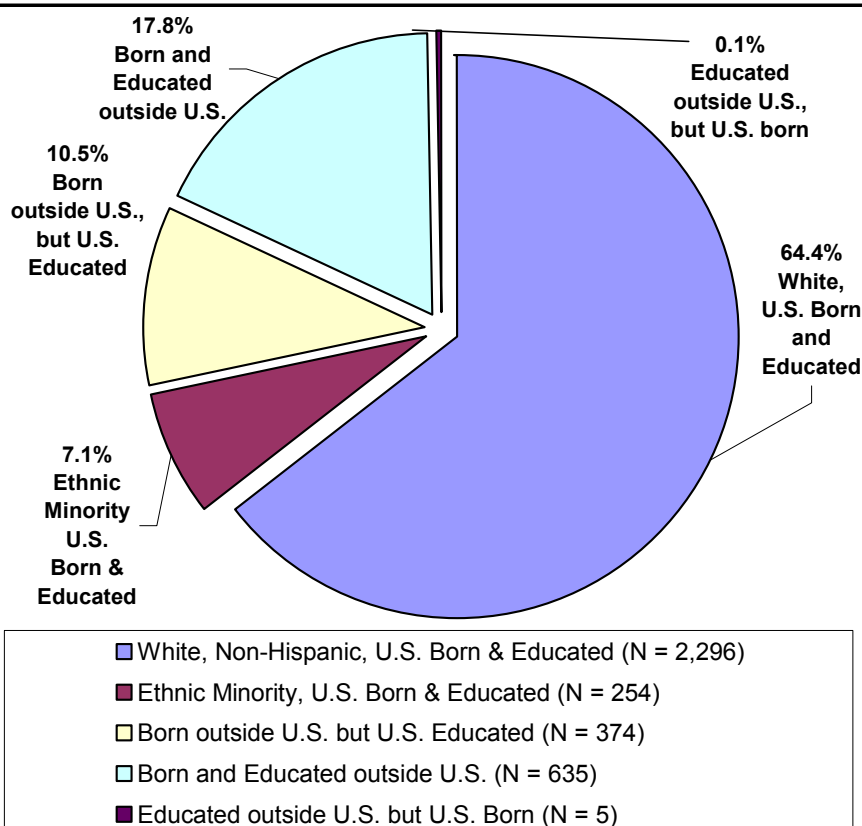
[a]Percentages do not add to 100 percent because of rounding.

[b]For the purpose of this analysis, all respondents who selected a response other than "White, Non-Hispanic" to survey question 117 are considered ethnic minority RNs.

[c]For in-patient hospital staff nurse respondents currently working in NYS, 88.3% who identified themselves as born outside the U.S. also identified themselves as belonging to an ethnic minority group.

An illuminating insight provided through direct comparison of the two pie charts is that *less than a quarter of all ethnic minority in-patient hospital RNs currently working in New York State were born and educated within the United States* (i.e., the 7.1 percent slice of the 32.1 percent portion of the pie). Of the remaining three quarters of ethnic minority RNs, the *majority were both born and educated as RNs outside of the United States*. In fact, far more ethnic minority RNs working as in-patient hospital staff nurses in NYS were born and educated in another country than were born and educated in the United States.

The finding that less than one fourth of ethnic minority in-patient hospital staff RNs practicing in NYS were born and educated within the United States suggests that efforts of Federal and State agencies, as well as of professional organizations, to recruit native-born ethnic minority students into nursing have not met with great success.

Direct efforts to recruit RNs trained in other countries, on the other hand, appear to have met with considerable success. That success however – while an important strategic response to the supply-demand imbalance that exists in New York State – has a number of less desirable "downstream" consequences. Serious questions have been raised, for example, about the capacity of developing nations, with fewer resources than the U.S. to devote to the training of their health care professionals, to manage this continuous drain upon their own supply of native-trained nurses. Serious questions must also be raised from a long-term risk appraisal perspective about the continued viability of domestic health-care policies that heavily rely upon the siphoning of professionals trained in other countries.

Geographic and Regional Distributions RNs Born and RNs Educated Outside of the United States

Figures 17 and 18 show that the three minority groupings of in-patient hospital staff RNs – ethnic minority, non-U.S. born but U.S. educated, and non-U.S. born/educated – are employed proportionally with far greater frequency in the NYC 5-borough area than in any other region of the State. The bar chart in Figure 17 shows

Figure 17
Percentages of All the In-Patient Hospital Staff RNs Working within a Region Who Belong to each Ethnic or Born/Educated outside U.S. Group: Percentages Within Each Region Total to 100%

Legend:
- ☐ White, Non-Hispanic, U.S. Born & Educated (N = 2,296)
- ☐ Ethnic Minority, U.S. Born & Educated (N = 254)
- ☐ Born outside U.S. but U.S. Educated (N = 374)
- ☐ Born and Educated outside U.S. (N = 635)
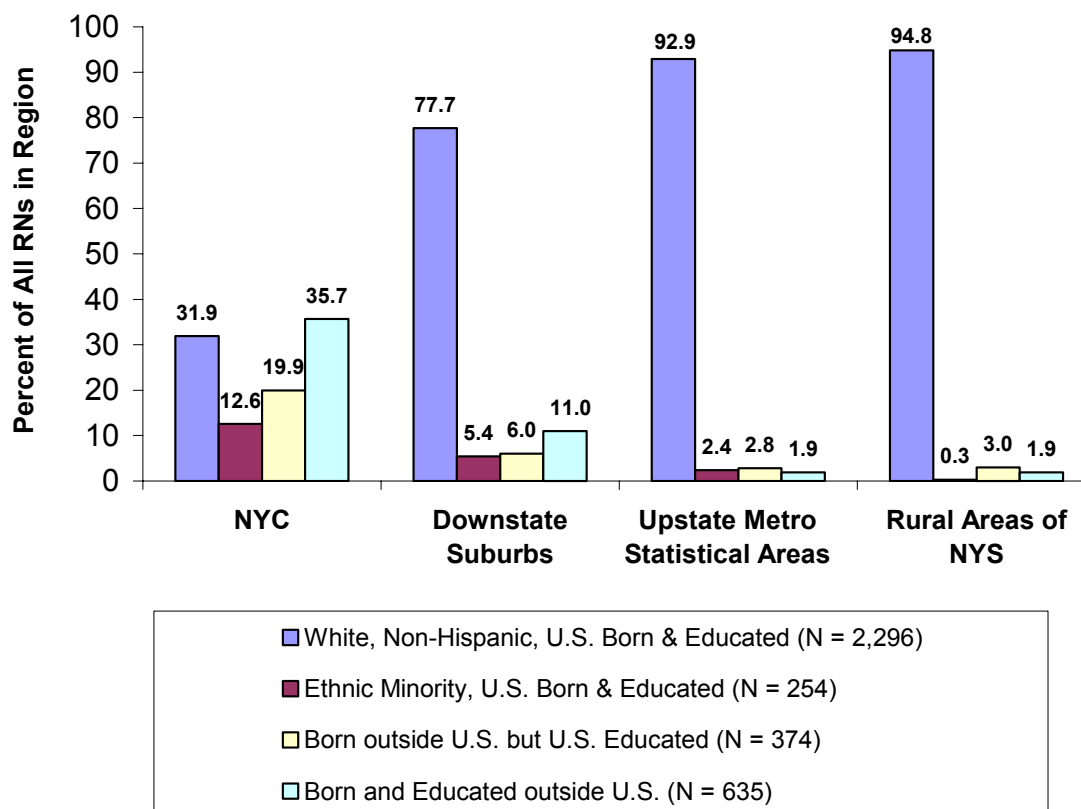
that in downstate suburbs, upstate metropolitan statistical areas, and rural areas of NYS, 78 percent, 93 percent and 95 percent of in-patient hospital staff RNs respectively are U.S. born and educated White (non-Hispanic) nurses. In stark contrast, within the NYC 5-borough area, only 32 percent are white, U.S. born and educated nurses.

Providing a different perspective on the statewide distribution of minority in-patient hospital staff RNs, the bar chart in Figure 18 shows that 71 percent of all U.S. born and educated ethnic minority staff RNs, 77 percent of non-U.S. born but U.S. educated staff RNs, and 81 percent of non-U.S. born and non-U.S. educated staff RNs find employment in the NYC area. In contrast, only 20 percent of all white, U.S. born and educated in-patient hospital staff RNs are employed in that region of the State.

Figure 18
For In-Patient Hospital Staff Nurses Working in NYS: Percentages of All Nurses Belonging to an Ethnic Group and/or Group Born/Educated outside U.S. Who Work in Each Region of NYS - Percentages for Each Group add to 100%
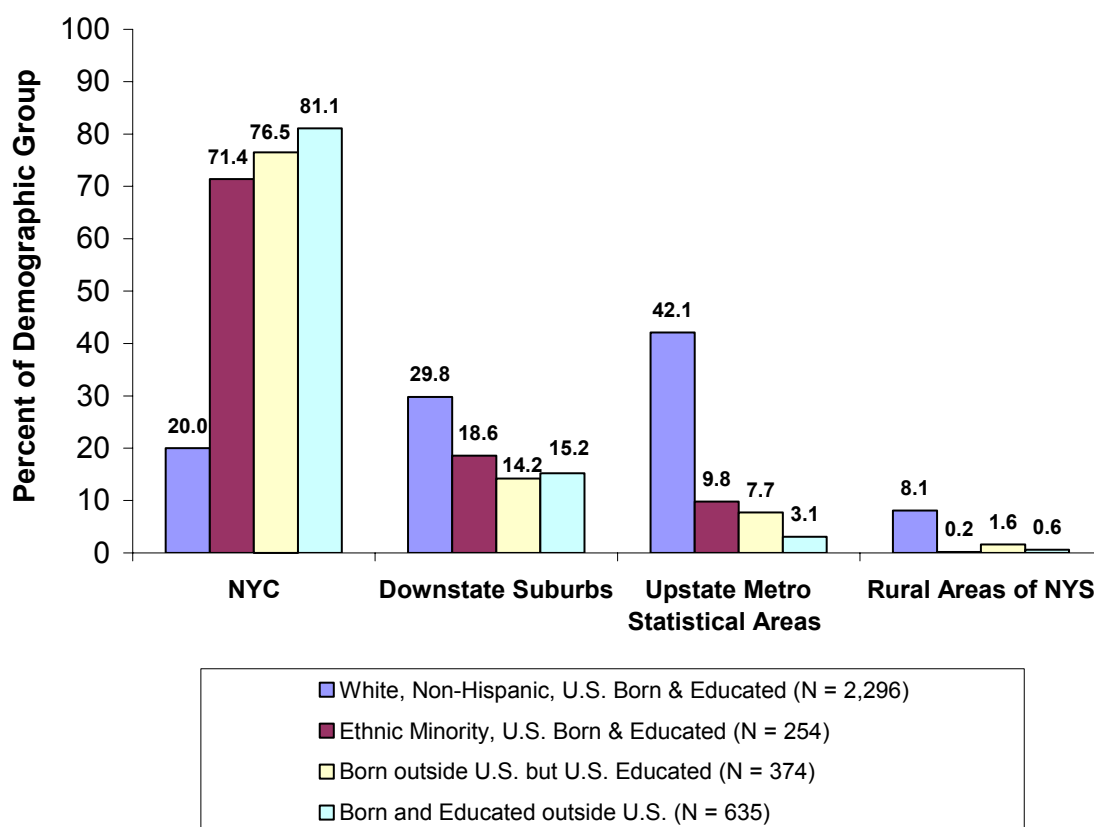
The minority grouping most highly concentrated in downstate areas of NYS are staff RNs who were both born and educated outside of the U.S. Only 3.7 percent of these in-patient hospital staff RNs reported working outside of the NYC or downstate suburban areas. If it has been necessary to recruit such large numbers of nurses born and educated outside of the U.S. to fill in-patient hospital staff nursing positions in these NYC area hospitals, it may be that working conditions and/or wages (relative to cost of

living) are especially unattractive within hospitals in the NYC and surrounding suburban areas of the State.

The bar chart in Figure 19 shows the percent of representation within the in-patient hospital staff nurse, nurse manager, and "all other RN" populations for each of the three ethnic minority groups that have sufficient sample size for statistical significance, namely, Black, Asian and Hispanic. The percent of "White, Non-Hispanic" representation is shown again in this chart for comparison purposes. Almost 50 percent more Asian nurses work as in-patient hospital staff nurses than Black nurses. In turn, Black nurses are four times more prevalent among in-patient staff nurses than Hispanic nurses. Compared to their presence in the general U.S. population, Hispanics are by far the most under-represented ethnic group among in-patient hospital staff nurses (and among all NYS working RNs).

Figure 19
Ethnic Group Identification[a]: NYS In-Patient Hospital Staff RNs, Nurse Managers, and All Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS

Percentages of RNs in Each Title Identifying Themselves with Different Ethnic Groups
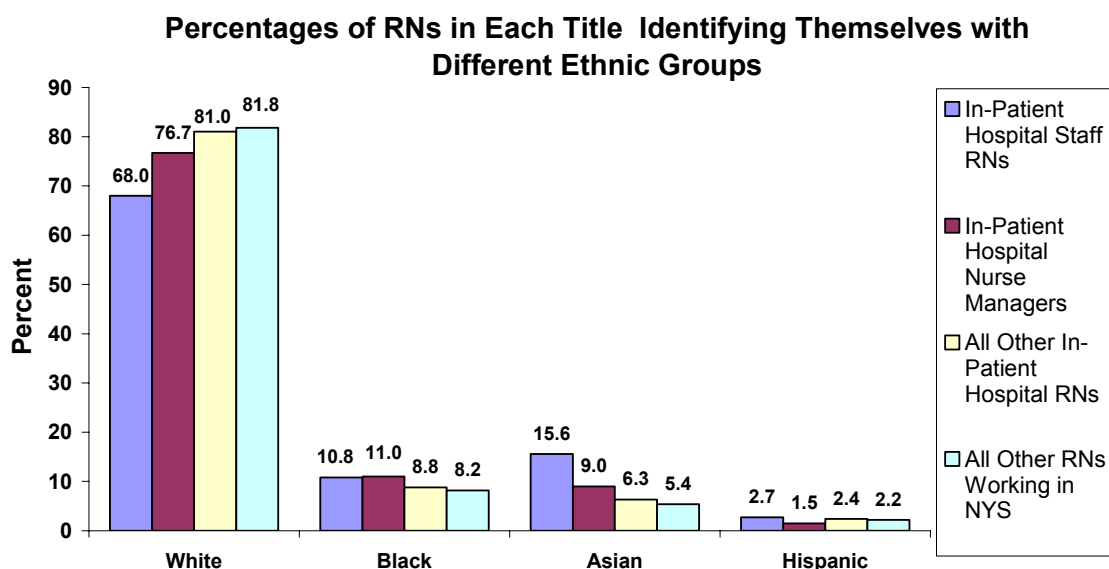
[a]Data shown is based on responses to survey question 117. Respondents were asked to select the response that best reflected their race/ethnicity from the following choices: "White, Non-Hispanic", "Black, Non-Hispanic", "Hispanic", "Asian", "Native American", "Other" and "Two or more races". Of in-patient hospital staff RNs and all other RNs, respectively 2.3% and 2.0% did not respond to this item. Less than 3% of all respondents selected from among the three ethnicity choices not shown above.

Members of each of the three minority groups are better represented among in-patient hospital staff RNs than among RNs working outside of the in-patient hospital setting. The proportional representation of these three ethnic minority groups among the more educated and highly-paid group of "other" in-patient hospital RNs is no better than among RNs working outside of the in-patient hospital setting.

Black nurses are found with equal frequency among in-patient hospital staff RNs and nurse managers. In contrast, 15.6 percent of the RN staff nurses are Asian, while only 9.1 percent of the nurse managers are Asian.

The bar chart in Figure 20 shows the percentages of all RNs in each major ethnic group who work as in-patient hospital staff RNs. While only 33 percent of all White, Non-Hispanic RNs work in a staff nurse capacity within an in-patient hospital setting, the contrast percentages were 43 percent for Black RNs, 42 percent for Hispanic RNs, and 60 percent for Asian RNs. In other words, an Asian RN working in NYS is almost twice as likely as a White RN to be employed as an in-patient hospital staff nurse.

Figure 20
Percentage of RNs Within Each of Four Ethnic Groups[a] Who Work as In-Patient Hospital Staff RNs

For each of Four Ethnic Groups, Percentage of All Working NYS RNs Who Are In-Patient Hospital Staff RNs
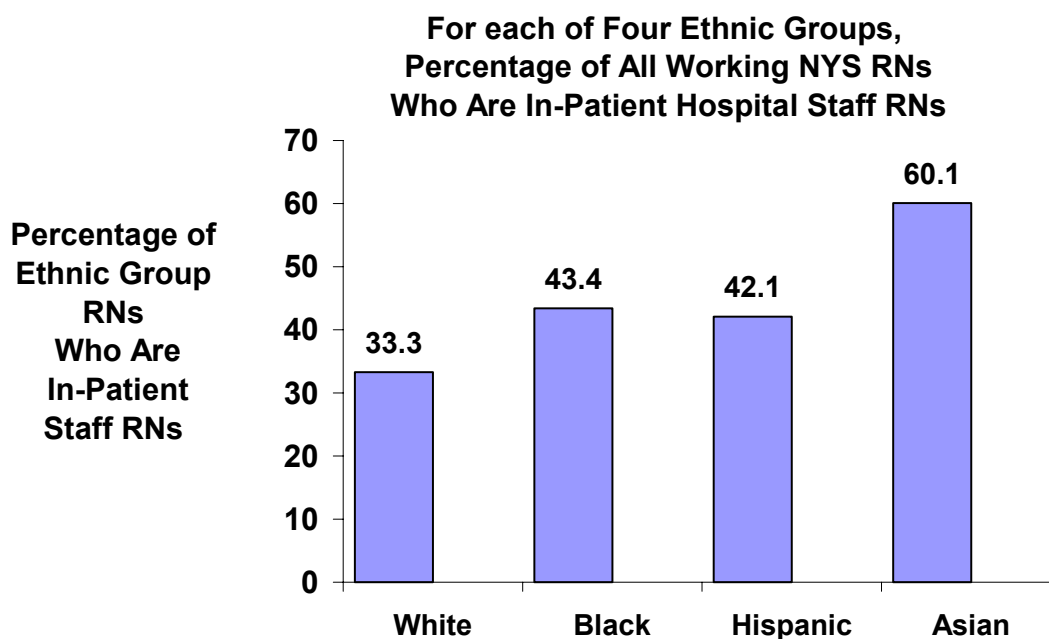
[a]Data shown are based on responses to survey question 117. Respondents were asked to select the response that best reflected their race/ethnicity from the following choices: "White, Non-Hispanic", "Black, Non-Hispanic", "Hispanic", "Asian", "Native American", "Other" and "Two or more races". Of in-patient hospital staff RNs and all other RNs, 2.3% and 2.0% respectively did not respond to this item. Less than 3% of respondents selected an ethnicity choices not shown above.

HOSPITAL AND NURSING HOME SETTINGS – CORRELATES OF FACILITY SIZE

Table 3 lists the three settings where the largest numbers of staff RNs in New York State are employed – in-patient hospitals, outpatient hospitals, and nursing homes. For each of these three facility types, the percentages of RNs working in small (99 beds or fewer), medium (100 to 299 beds) and large (300 or more beds) facilities are displayed.

The data shown in Table 3 indicate that almost three quarters of RNs working in these facilities work within in-patient hospital settings (74.4 percent). The majority (54.2 percent) of these in-patient hospital RNs work in large facilities (300 or more beds). In contrast, only 30.1 percent of nursing-home RNs work in large facilities. Indeed, the majority of nursing-home RNs (58.9 percent) work in medium-size facilities in the 100 to 299-bed range. Outpatient hospital RNs are mostly evenly divided between medium–size (42.9 percent) and large (46 percent) facilities. Only 7.4 percent of in-patient hospital RNs work in small facilities of 99 or fewer beds. Slightly higher percentages of outpatient hospital RNs (11.1 percent) and nursing home RNs (11.0 percent) reported working in small facilities.

Table 3

Percentages of In-Patient Hospital RNs, Outpatient Hospital RNs and Nursing Home RNs Working in Different Size Facilities

| Type of Facility | N[a] | Col. % | Size of Facility | | | Row % |
			% Small (99 beds or fewer)	% Medium (100 to 299 beds)	% Large (300 beds or more)	
In-Patient Hospital	4,357	74.4	7.4	38.3	54.2	100
Outpatient Hospital	611	10.4	11.1	42.9	46.0	100
Nursing Home	885	15.1	11.0	58.9	30.1	100
Total RN Respondents working in NYS Hospital or Nursing Home Facilities	5,853	100	8.4	41.9	49.7	100

[a]Sample N is number of respondents who gave valid responses both for size of facility (question 4b) and for type of facility (question 4, "setting").

Table 4
For RNs Working In Three Different Size In-Patient Hospital Facilities, Percentages who are Staff Nurses, Nurse Managers, and Who Hold All Other Job Titles:
Analysis Limited to RNs Working in NYS In-Patient Hospital Facilities

| Facility Size | N[a] | Col. % | Job Titles | | | % Total |
			% In-Patient Hospital Staff RN	% In-Patient Hospital RN Manager	% All Other In-patient Hospital RNs	
Small (99 beds or fewer)	324	7.4	81.7	7.7	10.6	100
Medium (100 to 299 beds)	1,670	38.3	79.6	8.0	12.4	100
Large (300 beds or more)	2,363	54.2	80.2	6.7	13.1	100
Total In-Patient Hospital RNs[a]	4,357	100	79.7	7.4	12.9	100
			Contingency Coefficent = .038 Significance = .383			

[a]Limited to respondents who responded to facility size question 4b on the survey

Table 4 displays for small, medium and large in-patient hospital facilities, the percentages of RNs employed as staff nurses, nurse managers, and as "other" job titles. Across all three sizes of hospitals, about 80 percent of the RNs employed work as staff nurses; between 7 and 8 percent are nurse managers; and, 11 to 13 percent are employed in "other" capacities. The average ratio of in-patient hospital staff RNs per nurse manager is about 11 to 1. The small, non-significant contingency coefficient of .031 indicates that the distributions of RNs across the three job title groups *do not differ* in facilities of different sizes. Stated differently, roughly the same proportions of RN employees work as staff nurses or managers regardless of the size of the facility.

Table 5 profiles data that point to important ways in which in-patient hospital and nursing home settings differ according to the sizes of these facilities. The dimensions along which facilities of different sizes most often differ, such as average RN age and hourly wage, are also key risk factors related to nurse attrition and/or "competitiveness" of the facility in attracting employees. The data presented in the table consequently paint a powerful picture of serious challenges confronting small and medium-size in-patient facilities as they struggle both to attract RNs and to stay in business in the face of the worsening nurse shortage.

Table 5 shows information about NYS in-patient hospital RNs on the left and nursing home RNs on the right. The two wide columns for each type of facility are further divided into three sub-columns, one for each facility size – small (99 beds or less), medium (100 – 299 beds) and large (300 beds or more).

The fact that the majority of in-patient hospital RNs work in large facilities and the majority of nursing-home RNs work in medium-size facilities was discussed above in reference to data presented in Table 3. The "Percent by Region" data listed in Table 5 show that, correspondingly, the majority of RNs who work in large facilities, either within in-patient hospitals (52.3 percent) or nursing homes (54.5 percent), work in the New York City five borough area. In contrast, RNs working in medium-size or small facilities more frequently are employed in upstate metropolitan statistical areas than in any one of the other three regions listed – New York City, downstate suburbs, or rural areas of New York State.

Because the majority of RNs who work in large facilities (either nursing homes or hospitals) work in New York City, it is difficult to separate the effects of a New York City work location from the effects of a large facility work setting. Multiple regression analyses revealed that many apparent correlates of facility size, such as job satisfaction and frequency-of-experiencing-great-stress, were actually much more strongly related to a NYC work location than to facility size.[6] The employee and employment characteristics data shown in Table 5 are characteristics that multiple regression analyses confirmed as each having a strong relationship with facility size independent of work location.

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[6] Relationships between work location (i.e., downstate vs. other) and work climate measures are discussed extensively in Chapters 2, 3, and 4 of Volume II.

Table 5
In-Patient Hospitals and Nursing Homes Compared by Facility Size on Key
Risk Factors for Nurse Attrition: Analysis Limited to RN Respondents Currently Working in NYS

	In-Patient Hospital			Nursing Home		
	Small (99 beds or less)	Medium (100 - 299 beds)	Large (300 beds or more)	Small (99 beds or less)	Medium (100 - 299 beds)	Large (300 beds or more)
N	325	1,670	2,362	97	521	267
Percent (within Type of Facility)	7.5	38.3	54.2	11.0	58.9	30.1
Percent by Region						
NYC	16.0	26.6	52.3	6.2	23.8	54.5
Downstate Suburbs	14.2	28.5	25.0	13.4	20.2	18.0
Upstate MSAs	42.2	36.8	22.1	53.6	42.4	26.7
Rural	27.7	8.1	0.6	26.8	13.6	0.8
All Regions	*100*	*100*	*100*	*100*	*100*	*100*
Average Age						
All Regions	**46.5**	**45.0**	**43.6**	**49.8**	**48.1**	**48.3**
NYC	48.2	46.1	44.1	40.5	46.9	47.1
Downstate Suburbs	47.6	44.9	43.1	50.4	48.5	51.1
Upstate MSAs	46.0	44.8	42.9	50.4	48.2	49.2
Rural	46.5	45.0	43.6	50.4	49.3	***[d]
Dollars/Hour [a]						
All Regions	**$22.55**	**$26.84**	**$29.47**	**$20.24**	**$23.97**	**$28.18**
NYC	$29.98	$31.88	$32.09	$28.73	$30.70	$31.64
Downstate Suburbs	$26.42	$29.19	$30.99	$24.37	$29.76	$29.87
Upstate MSAs	$20.89	$22.97	$22.37	$18.09	$19.05	$20.01
Rural	$19.24	$21.63	$22.56	$20.48	$19.27	***[d]
% Attained Degree						
Bachelor's or Above	38.6	52.2	64.7	25.6	37.3	50.9
Master's or Above	7.7	12.0	15.0	6.2	9.7	15.2
Promotional Opportunity [b]	**2.53**	**2.69**	**2.80**	**2.62**	**2.81**	**2.98**
Work Schedule						
% Full Time Employees	68.0	68.7	76.1	66.6	73.0	80.6
% Work Overtime	56.9	48.8	44.9	48.8	44.7	33.7
% OT "Always Mandatory" [c]	17.9	14.2	13.9	24.0	9.4	12.2
Average Hours Overtime	6.9	6.3	7.5	6.7	8.1	***[d]

[a]"Dollars per Hour" was calculated by adding up total hours of work per week reported from 1) primary RN job, 2) overtime, and 3) 2nd job(s), multiplying by 50 workweeks/year, then dividing by reported total annual earnings from all nursing jobs.

[b]Promotional Opportunity Scale Scores ranged from a low of "1" to a high of "5".

[c]Percent of RNs who work overtime who responded to survey question 10 by indicating OT work is "always mandatory" rather than "sometimes" or "never" mandatory.

[d]Insufficient N within cell to calculate an average for statistically meaningful comparisons.

Table 5 data reveals a consistent negative relationship between RN age and the size of the facility within which s/he works, especially within in-patient hospital settings. Among the small-size hospital facilities, the average RN age was 46.5 years – but that average age drops to 43.6 years of age in the large-size facilities. The finding may also reflect the greater ease with which higher-paying large facilities can attract recent young graduates to come work for them.

It is also the case that smaller-size facilities – in-patient hospital and nursing home facilities alike – appear to differ substantially in the educational preparation of their RN staff. Within small in-patient hospitals, for example, only 38.6 percent of RNs possess a bachelor's degree credential as their highest degree attained, and only 7.7 percent hold a master's level or higher credential. These figures contrast quite dramatically with the typical RN staffing profile in large (300 bed or larger) in-patient hospital facilities. Here, 64.7 percent of RN employees possess the bachelor's credential and 15 percent possess a master's credential – roughly double the percentage in small-size facilities. Very similar education-distribution differences characterize the facility-size relationship in nursing home settings.

In view of these sharply etched educational differences among RNs working in facilities of differing size, it is hardly surprising to observe similarly pronounced salary differences among small, medium and large facilities. Larger in-patient hospital facilities, with more highly educated staff, pay substantially more on an hourly basis than do their small-bed counterparts ($29.47 vs. $22.55 per hour). Within the nursing home sector, these facility-size differentials are reflected in hourly wages on average of $20.24 per hour in small-size versus $28.18 per hour in large-size facilities.

The promotional opportunity scale average scores shown in Table 5 also indicate that RNs working in large facilities perceive greater promotional opportunities for themselves than RNs working in medium size facilities who, in turn, perceive greater promotional opportunities than RNs working in small facilities. This observation applies both to in-patient hospital and nursing home settings. Perceived promotional opportunity correlates substantially with job satisfaction for all RNs but, among the four comparison groups, the correlation is strongest for in-patient hospital nurse managers (0.52, see Figure 30). The timing of nurse managers' plans to leave their current nursing jobs also appear to be substantially related to their perceived promotional opportunities (correlation magnitude = 0.35, see Figure 33), even more so than for RNs holding other titles. The perception of greater promotional opportunities in larger facilities certainly gives such facilities an advantage in retaining and recruiting RNs, especially at the managerial level.

Finally, the work schedule data shown at the bottom of Table 5 provide further evidence of the less competitive employment conditions offered by the smallest compared to the largest facilities. Small facilities hire proportionally fewer full-time RNs; a greater percentage of RNs in small facilities report working overtime; and, a greater percentage of RNs in small facilities who work overtime report that their overtime work is "always mandatory."

IN-PATIENT HOSPITAL RNS' HOURS AND EARNINGS

The bar chart in Figure 21 depicts the percentages of RNs in the three in-patient hospital comparison groups – staff RNs, nurse managers and all other in-patient hospital RNs – as well as the percentages of RNs in the fourth "not working in in-patient hospitals" comparison group. These five groups are limited to RNs currently working as nurses in New York State and are defined as follows: 1) full time and has only one job; 2) full time and has one or more part-time (or full-time) jobs in nursing; 3) full time and has one or more part-time (or full-time) jobs outside of the nursing field; 4) part time and does not have a 2nd job; and, 5) part time and has a 2nd job.[7]

Figure 21
Employment Status: In-Patient Hospital Staff RNs, Nurse Managers, All Other In-Patient Hospital RNs and All Other RNs Working in NYS Compared
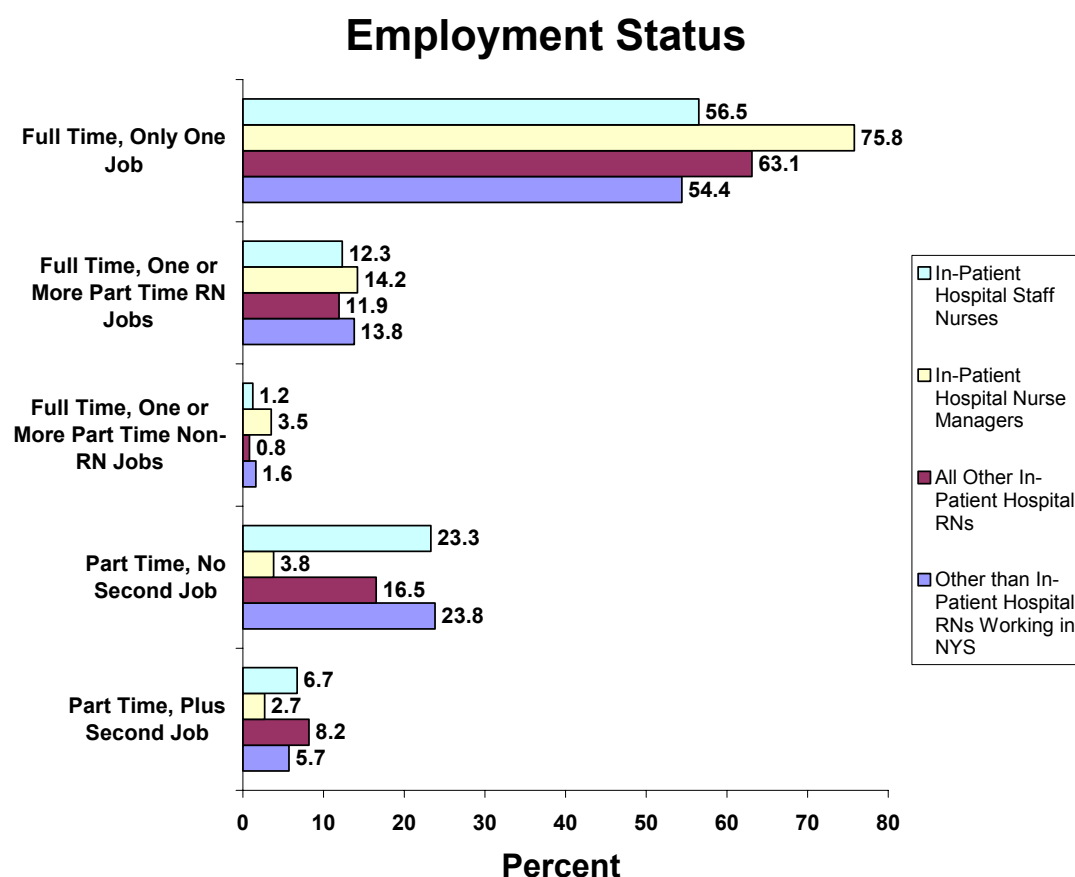
The percentages shown in the Figure 21 indicate that the part-time/full-time job status distribution of in-patient hospital staff nurses mirrors closely the job status

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[7] Only respondents who provided sufficient responses to indicate to which of the five "employment status" groups they belonged could be included in this analysis.

experience of "all RNs who do not work in in-patient hospitals." For this set of comparisons, it is the in-patient hospital nurse managers whose employment pattern differs widely from the norm. Nurse managers work full time with only one job almost 40 percent more often than the large comparison group of "all RNs not working in in-patient hospitals," and almost 35 percent more often than the staff nurses whom they supervise. Nurse managers are only one sixth as likely to work part time (with no 2nd job) than are other nurses.

Overtime Hours

Another source of extra workweek hours, not indicated in Figure 21, are those hours worked in an overtime capacity (OT). The bar chart in Figure 22 highlights this information for each of the four comparison groups. Consistent with expectation, a far higher percentage of in-patient hospital staff RNs (48.6 percent) work on an overtime basis in some capacity than do any of the other three groups. Nurse managers are the "runner up" group, with 34.1 percent working on an overtime basis. The mixed job title group, which includes all remaining in-patient hospital RNs, is least likely to be engaged

Figure 22
Overtime (OT) Work Requirements: In-Patient Hospital Staff RNs, RN Managers,
All Other In-Patient Hospital RNs, and All Other RNs Working in NYS

Percentages of RNs with Different Overtime (OT) Work Requirements

Legend:
- In-Patient Hospital Staff RNs
- In-Patient Hospital Nurse Managers
- All Other In-Patient Hospital RNs working in NYS
- All Other than In-Patient Hospital RNs Working in NYS
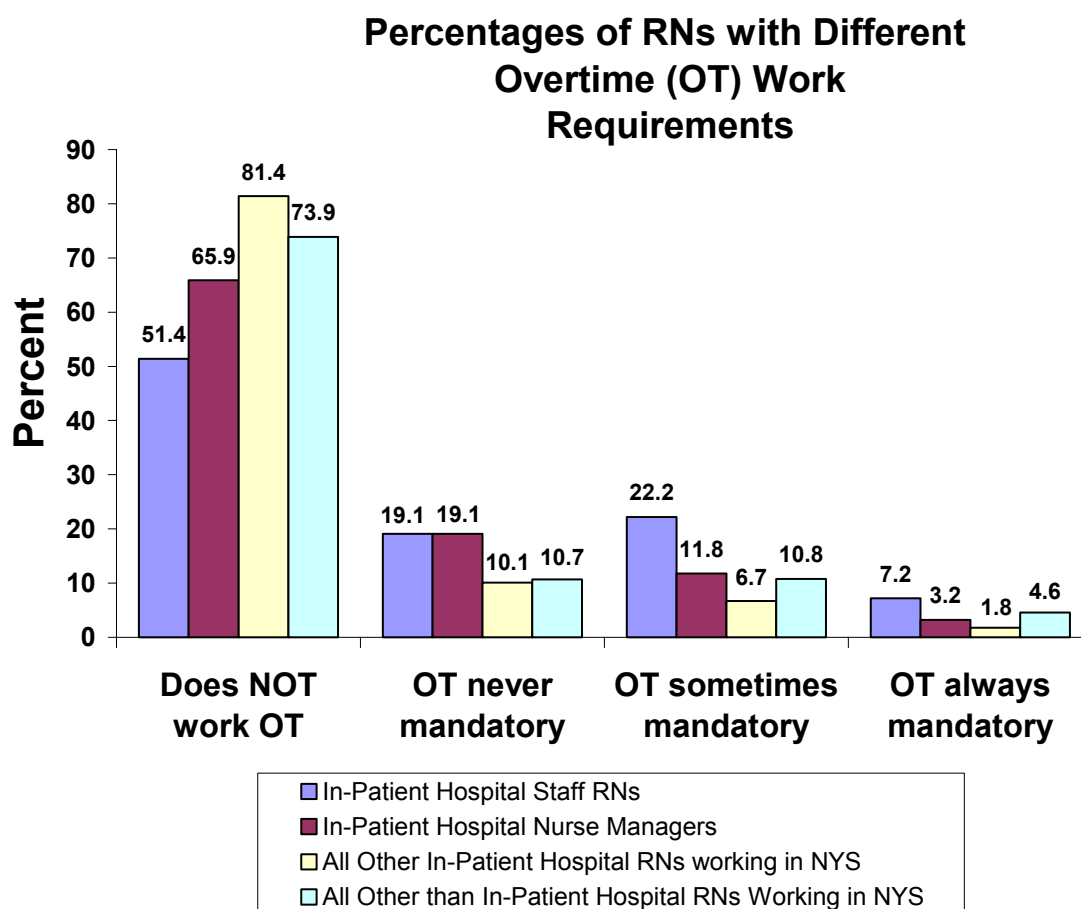
in work on an OT basis (18.6 percent). And, only 26.1 percent of RNs not working in in-patient hospital settings report working on an overtime basis, a percentage that is close to half that of in-patient hospital staff RNs.

Overtime Work Status and Job Satisfaction of In-Patient Staff Nurses

Table 6 displays average job satisfaction and stress scores, as well as average scores for timing-to-exit (from both their current job and from the nursing profession) for in-patient hospital staff nurses whose jobs have different overtime requirements (corresponding to the OT requirement categories shown in the bar chart in Figure 22 above). The table data clearly indicate that nurses whose overtime work is "always" done on a mandatory basis are far more stressed, less satisfied with their jobs, and less organizationally committed than are RNs whose OT work is "sometimes mandatory " or "never mandatory." In addition, those RNs whose OT work is always mandatory are also planning to leave their current jobs sooner than are other nurses.

Table 6
Mean Satisfaction Scale and Timing to Exit Scale Scores by Overtime (OT) Work Status,
for NYS In-Patient Hospital Staff RNs

Scales	*Means for Agreement with Proposal Score*						
	(1 = Definitely Disagree to 5 = Definitely Agree)					Eta[a], (3 'Works OT' Levels)	Eta[a], (all 4 Levels)
	Does Not Work on OT Basis	Works OT, Never Mandatory	Works OT, Sometimes Mandatory	Works OT, Always Mandatory	Total		
N =	1,729	645	747	243	3,364		
Average Age of Respondents in OT Category	43.2	42.2	43.9	44.1	43.2	.085	.058
Satisfaction Scales [b]							
Global Job Satisfaction	3.33	3.45	3.36	3.07	3.34	.173	.122
Organizational Commitment	3.02	3.17	3.00	2.67	3.02	.217	.154
How often do you feel under great stress?	3.73	3.80	3.86	4.08	3.80	.088	.085
Job Stress - Workload	3.93	4.04	4.06	4.15	4.00	.051	.099
How enthusiastic would you be in recommending nursing as a career to others?	3.49	3.59	3.46	3.00	3.47	.155	.112
Timing to Exit Scales [c]							
Timing to exit job setting	3.98	4.12	4.08	3.83	4.02	.087	.071
Timing to exit nursing profession	4.64	4.71	4.66	4.48	4.64	.097	.068
All ages: % Leaving nursing < 5 years	21.4	18.1	19.3	27.5	20.7	.079[d]	.057[d]
Current age < 52: % Leaving nursing < 5 years	13.6	12.7	13.0	24.9	14.6	.120[d]	.086[d]

[a]Both three level and four level analyses of variance are significant above the .01 level.

[b]Satisfaction scale scores range from "1", "strongly dissatisfied" to "5", "strongly satisfied."

[c]Timing to Exit Scale scores range from "1", "I have already left" to "2", "planning to leave in the next 12 months", to "3", "planning to leave in 1 to 2.9 years", to "4", "… in 3 to 4.9 years", to "5", "not for 5 years or more."

[d]Contingency coefficient substituted for eta statistic because dichotomous data required Chi-Square analysis.

All three groups of RNs who report working overtime also report experiencing "great stress" more frequently, and experiencing more "workload stress" (i.e., having enough time to get the job done) than RNs who do not work on an overtime basis. On the other hand, in-patient hospital staff RNs who work overtime but whose overtime work is "never" done on a mandatory basis report actually being somewhat more satisfied with their jobs, and more "committed" to the organization that employs them, than are nurses who do not work on an overtime basis. The opportunity to earn extra money through overtime work may be related to this increased level of job satisfaction.

Hourly Wage Data – In-patient Staff RNs and Their Comparison Groups

Table 7 displays wage-related data for the four comparison groups of RNs. NYS in-patient hospital staff RNs, nurse managers, and all other in-patient hospital RNs comprise the first three groups, and all RNs working in NYS outside of in-patient hospitals comprise the fourth, and largest, comparison group. Table 7 describes the average dollars/hour earnings and average total annual earnings (of RNs working 35 hours or more per week) for each of the four groups, while simultaneously breaking down this wage data by nurses' level of experience (0-10 years, 11-20 years and 21 or more years) and highest educational degree attained (diploma or associate's degree, bachelor's degree, or master's degree and above).

The data in Table 7 demonstrate that years of experience and level of educational attainment both have a substantial relationship with increased hourly wage for nurses in each of the four comparison groups. For example, associate's/diploma-educated in-patient hospital staff RNs in the highest years experience category earn $5.60 per hour more than associate's-educated in-patient hospital staff RNs in the lowest experience category. Master's-educated in-patient hospital staff RNs in the

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Table 7

Total Earnings of RNs by Highest Degree Attained and Years of RN Experience
In-Patient Hospital Staff RNs, Nurse Managers & All Other In-Patient Hospital RNs
Compared to All Other RNs Working in NYS

| | | Highest Level Degree Attained | | | | | |
| | | Diploma or Associate's | | Bachelor's Degree | | Master's and Up | |
Three Levels of Experience	N	Total Earnings[a] Full Time +	Dollars/ Hour[b]	Total Earnings[a] Full Time +	Dollars/ Hour[b]	Total Earnings[a] Full Time +	Dollars/ Hour[b]
RN Experience 0 - 10 Years							
In-Patient Hospital Staff Nurse	1,263	$50,300	$22.50	$55,800	$25.30	$59,200	$28.60
In-Patient Hospital Nurse Manager	40[c]	***	***	***	***	***	***
All Other In-Patient Hospital RNs	63[c]	***	***	***	***	***	***
All Other RNs Working in NYS	983	$46,10	$21.00	$53,100	$25.10	$64,700	$29.30
RN Experience 11 - 20 Years							
In-Patient Hospital Staff Nurse	1,064	$56,700	$25.70	$64,800	$28.90	$70,400	$29.40
In-Patient Hospital Nurse Manager	96	$64	$26.80	$65,700	$29.60	$76,800	$31.10
All Other In-Patient Hospital RNs	168	$59,000	$26.10	$64,200	$26.70	$87,400	$37.20
All Other RNs Working in NYS	1,334	$48,800	$22.70	$55,800	$25.60	$66,700	$30.40
RN Experience Over 20 Years							
In-Patient Hospital Staff Nurse	1,073	$62,600	$28.10	$70,600	$31.00	$70,300	$31.10
In-Patient Hospital Nurse Manager	187	$64,800	$28.60	$74,400	$32.20	$79,600	$35.60
All Other In-Patient Hospital RNs	324	$62,400	$28.80	$70,200	$32.80	$84,900	$36.90
All Other RNs Working in NYS	2,146	$50,400	$23.80	$59,600	$27.40	$71,200	$32.70

[a]"Total Earnings" are shown only for RNs working full time or more, and includes earnings from all RN related employment.

[b]"Dollars/Hour" is calculated from total hours worked per week reported, including 2nd jobs, overtime, and principle job regular hours. Unrealistically low "dollars/hour" figures generally represent people who work only a few months per year, so amounts under $9.00 have not been included in the analysis.

[c]For in-patient hospital nurse managers and all other in-patient hospital RNs, the Ns (number of survey responses) for each cell were too small to yield reliable averages.

lowest experience category earn $6.10 more per hour than associate's-educated in-patient hospital staff RNs in the same level of experience category.

However, the increased financial advantage of additional educational attainment decreases as in-patient hospital staff RNs gain more years of experience. Within the 11-20 years experience group, the increment in hourly wage between associate's-educated RNs and master's-educated RNs is only $3.70 per hour, and within the over-20 years experience category the wage difference is only $2.90 per hour. This data may help explain why the most-selected reason for not pursuing additional education by in-patient hospital staff RNs was "benefit does not justify tuition or time cost." The data also demonstrate, however, that even for RNs in the over-20 years experience category, additional education can provide substantial increases in earnings if in-patient hospital staff RNs change their occupational title (i.e., take another job), especially if they remain working within the in-patient hospital setting.

The education section of this Supplement revealed that, while only 6 percent of in-patient hospital staff RN survey respondents currently held a master's degree, almost 40 percent planned on obtaining one. The younger than average age of these RNs, in concert with the much lower than average prevalence of master's degrees among them, and their high level of professed interest in obtaining that credential, present strong evidence of the desirability of the master's credential among in-patient hospital staff RNs. Yet few remain in that job title once the master's degree is obtained. For many in-patient hospital staff RNs, a master's degree may provide the avenue of choice out of that job title, into a less stressful and more highly remunerated position, either inside or outside of the in-patient hospital setting.

For RNs without a master's (or higher) degree, however, the same data show clearly why so many survey respondents wrote to us explaining that they only stayed in their highly stressful in-patient hospital staff positions because no other job would pay them so well. In-patient hospital staff RNs with over 20 years experience with a diploma/associate's level of education earn an average hourly wage of $28.10. Nurse's employed outside of in-patient hospitals with a similar level of education earn only 23.80 dollars per hour, an 18 percent lower hourly wage. Staff nurses at the bachelor's level and over 20 years experience would face, on the average, a 13 percent lower hourly wage if they took a job outside of the in-patient hospital setting.

For full-time staff nurses, the probable loss in average annual earnings for those contemplating a job outside of the in-patient hospital setting would be even greater than these hourly-wage decrements, examined alone, would indicate. Because in-patient hospital staff nurses work significantly more paid overtime than nurses working outside of in-patient hospitals, the difference in total annual earnings between these two groups, (both with over 20 years experience) is 24 percent for nurses educated at the diploma/associate's level and 19 percent for nurses educated at the bachelor's level. It is little wonder then, that in-patient hospital staff nurses, though less satisfied with their jobs (on average) than other nurses, are also inclined to remain in those jobs for much longer intervals than are other nurses (see Figure12).

A Multivariate View of In-patient Hospital Staff Wages

Table 8 presents the results of a multiple regression analysis in which we assess the relative importance, and independent effects, of region of employment, facility size, years of experience and level of educational attainment, to the wages of in-patient hospital staff RNs working in New York State.[8] These factors are listed in order of the strength of their "beta weights" (shown in column three of the table), and hence in the order of the strength of their contributions to predicting in-patient hospital staff RNs hourly wages.

As the table data reveals, the single factor whose direct effect upon staff RN's hourly wage is most powerful is the region of the State in which they are employed. The simple fact of regional location (in the New York City 5-borough area or not) accounts for 13 percent of the variability in hourly wages for in-patient hospital staff nurses. Stated differently, a one-unit change in this independent measure predicts an average increase in hourly earnings of $8.96 per hour. The regression results also show that the distinction between an upstate vs. a downstate location of employment is at least four times more powerful as a predictor of an in-patient staff nurse's hourly wage than is the next strongest predictor, "years of experience as an RN."

Table 8

Regression Analysis Summary for Variables Predicting Dollars/Hour Average Earnings of In-Patient Hospital Staff Nurses Working in NYS

($R = .567$, $R^2 = .322$, N = 3,197, Significance Level exceeds .000)

Variables	B	SEB	Beta	Sig.
New York City Practice (yes/no)	8.96	0.614	0.512	0.000
Downstate Suburbs Practice(yes/no)	7.28	0.614	0.371	0.000
Upstate Metro Statistical Areas (yes/no)	0.55	0.592	0.030	0.352
Years Experience as RN	0.23	0.012	0.272	0.000
Large Facility: 300 beds + (yes/no)	2.48	0.513	0.145	0.000
Medium Facility: 100 - 299 beds (yes/no)	1.75	0.505	0.100	0.001
Has Bachelor's Degree (yes/no)	1.03	0.269	0.060	0.000
Has Master's Degree or above (yes/no)	1.21	0.541	0.034	0.026

The standardized regression coefficient, or beta weight, associated with years of nursing experience is .27 – indicating that a one standard deviation unit increase in years of nursing experience is associated with a .27 standard deviation increase in

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[8] (Categorical variables such as "region of RN practice in NYS" required coding as multiple dichotomous "yes/no" variables.)

hourly wages, a moderately powerful effect. Stated differently, each year of actual on-the-job work experience contributes to an estimated $ 0.23 per hour increase in wages – such that ten years of experience may add an additional $2.30 to a staff RN's hourly wage in in-patient hospital settings. The magnitude of the "experience" beta weight indicates that its direct effect upon hourly wages is more than twice as strong as the next strongest predictor – "facility size."

The facility size of the in-patient hospital in which a staff nurse works also exerts a relatively potent independent effect upon hourly wage. Indeed, as shown by the two facility-size unstandardized regression coefficients (B), the hourly-wage effect for staff nurses working in a large (300 beds plus) facility is $2.48 per hour higher, other things being equal, than in a small (100 beds or less) facility; similarly, employment in a medium-size facility (in the 100-299 bed range), will yield an hourly wage which is $1.75 per hour higher than in a small-bed facility.

More importantly, attainment of a bachelor's or master's degree is shown to have the *weakest* direct effect upon an inpatient hospital staff RN's hourly wage, in comparison with the other factors affecting earnings. As the regression data indicate, attainment of a bachelor's degree – in comparison to associate's degree/diploma credential holders – yields an additional $1.03 per hour increase in wages while having a master's degree yields only a $1.21 hourly increase by comparison to the same (omitted) reference group, the associate's and diploma degree holders.

As we have seen, a five-year experience effect ($0.23 per hour x 5 years = $1.15 hourly-wage increase) results in about the same wage increment as attaining a bachelor's degree in comparison to attainment of an associate's degree. This same data further suggests that attainment of a master's degree would result in only a $1.21 hourly-wage increase above the predicted hourly wage of an associate's degree holder. Stated differently, this analysis clearly suggests that *within the specific context of in-patient staff nursing in hospital settings,* pursuit of a master's degree can be expected to yield only $0.18 per hour more than the hourly wage earnings of an RN who stopped her/his formal education at the bachelor's degree level. Clearly, the added effort or investment required to attain such higher level credentials given the negligible return generated makes little economic sense – unless there are alternative career tracks available within the in-patient hospital setting itself, outside of staff nursing roles, where the wage premium of such added credentialing is more substantial.

In Table 9 we test that idea by examining the results of an identical regression analysis conducted among RNs in hospital settings who are *not* performing in-patient staff nursing roles. This analysis reveals several critical findings:

➤ First, the magnitude of the facility size effects, as well as the regional effects upon hourly wages generally mirror quite closely the effects observed in our earlier analysis;

➤ However, the experience effect among these hospital-based RNs in non-staff roles is almost negligible ($.08 per hour for each added year of experience vs. $0.23 per hour for each added year of experience as a staff nurse).

➢ Most importantly, in these roles (some of which would include higher-level administrator and nurse manager roles) the attainment of the bachelor's and the master's degree credentials appear to be *very important financially.* That is, in stark contrast to the more modest impact of higher-educational attainment in staff nursing roles (above and beyond the associate's degree), a bachelor's degree yields an additional $2.59 in hourly wages and a master's, $6.06 per hour over and above the basic associate's degree;

➢ In effect, this strongly suggests that financially more attractive positions are available to RNs in in-patient hospital settings – *but only if* they move into non-staff nurse roles. Furthermore, in the latter type of career track, i.e., in non-staff nursing roles within the hospital, the acquisition of a master's degree carries real pay-off. In contrast, as a staff nurse, the wage effects of this higher-level credentialing are far smaller; the acquisition of a master's degree provides virtually no added salary benefit (above and beyond the additional hourly wage associated with a bachelor's degree); and, a modest increase in experience increases wages even more than the acquisition of a bachelor's degree.

Table 9
Regression Analysis Summary for Variables Predicting Dollars/Hour Average Earnings of Nurse Managers and "Other" In-Patient Hospital RNs, but *Not* Including Staff RNs, Working in NYS

(R = .405, R^2 = .164, N = 807, Significance Level exceeds .000)

Variables	B	SEB	Beta	Sig.
New York City Practice (yes/no)	9.80	2.218	0.339	0.000
Downstate Suburbs Practice(yes/no)	7.35	2.210	0.233	0.001
Upstate Metro Statistical Areas (yes/no)	-0.46	2.140	-0.015	0.830
Years Experience as RN	0.08	0.049	0.050	0.124
Large Facility: 300 beds + (yes/no)	2.39	2.009	0.085	0.234
Medium Facility: 100 - 299 beds (yes/no)	2.66	1.951	0.093	0.173
Has Bachelor's Degree (yes/no)	2.59	1.223	0.089	0.034
Has Master's Degree or above (yes/no)	6.06	1.226	0.211	0.000

In summary, it is safe to say that for RNs employed early on in their careers as staff nurses in large in-patient hospital facilities in downstate metropolitan areas, simply remaining in their positions over time has a larger impact on their salaries than would the arduous process of earning an advanced degree. These results shed further light on the financially-based but grim decision of many in-hospital staff RNs to either remain unhappily in their positions until the earliest date that they can retire or to seek other more remunerative career paths outside of staff nursing. And retire they do, as will be

shown later in this Supplement, at considerably younger ages, on average, than do RNs more happily employed outside of the in-patient hospital setting.

RNs Earning a Low Hourly Wage Work More Hours per Week

For the 70 percent of in-patient hospital staff RNs who work full time or more, their average workweek is 45 hours. Of this group, one nurse in five has a second job, and one nurse in five reports working 50 hours or more in an average workweek. In addition, close to 60 percent of in-patient hospital staff nurses working on a full-time basis also work overtime. Among this group, 40 percent report working an average of 8 or more hours overtime each week, and 15 percent report working an average of 12 or more hours overtime weekly. Who among in-patient hospital staff nurses are choosing to put in large numbers of extra hours per week?

In Volume I of this report we demonstrated that, for the general population of RNs working in NYS, the correlation between average hourly wage and average hours worked per week was moderately strong and negative (-.317). In other words, the less money earned per hour, the more hours per week a nurse is likely to work. Furthermore, this negative relationship between hourly wage and total hours worked is even stronger if the analysis is limited to RNs working full time.

Table 10 displays the simple product-moment correlations between average dollars/hour earned and average total hours worked per week for select groups of nurses. These data show how the relationship between hourly wage and hours worked per week becomes more evident (i.e., the magnitudes of the correlation coefficients become greater) if the analysis "controls" for job title and practice region by limiting the analysis to populations for which those "variables" are held constant.

For all in-patient hospital staff nurses, the correlation between hourly wage and total hours worked per week is -.403. In other words, 16 percent of the variability in the number of hours in-patient staff nurses work per week is accounted for by their hourly wage, i.e., nurses earning less per hour work more hours.

Table 10

Correlations Between Dollars/Hour Wages & Total Hours Worked per Week
Magnitudes of the Correlation Coefficients Are Greater if Job Title
and/or Region Are Held Constant

Populations for Correlation Analyses	N	Correlation Coefficients between Dollars/Hour Wages & Total Hours Worked per Week
All Full Time RNs working in NYS	6,750	-0.317
All Full Time NYS In-Patient Hospital Staff RNs	2,570	-0.403
All Full Time NYS In-Patient Hospital Nurse Managers	317	-0.559
All Full Time In-Patient Hospital Staff RNs working in NY City	1,162	-0.551
All Full Time In-Patient Hospital Staff RNs working in Downstate Suburbs	564	-0.551

When the analysis is limited to in-patient hospital staff RNs working in the NYC area, much of the "noise" or variability in the dollars/hour data due to regional cost variations in professional wages is removed, allowing the strength of the relationship between dollars/hour wage and hours worked per week to emerge more clearly. The correlation coefficient rises in magnitude to a startling -.55, i.e., over 25 percent of the variability in the number of hours worked per week by in-patient staff RNs is accounted for by their hourly wage, with lower-wage RNs working more hours per week than higher-wage RNs. Figure 23 on the following page illustrates this relationship.

The heights of the bars shown in the histograms of Figure 23 correspond to the average hourly wages of RNs whose "total hours worked per week" fall into each of eight "total hours"- intervals.[9] The top bar chart in Figure 23 shows the relationship between hourly wage and total weekly hours worked for *all* in-patient hospital staff nurses currently working in New York State ($r = -.40$). The left-most bar shows that the average hourly wage for full-time staff nurses working a total of 35 to 39 hours per week is $31.23. The right-most bar shows that the average hourly wage of nurses working more than 70 hours per week is only $18.26 (less than 60 percent of the wage earned by the well-paid, better-rested first group who do not work overtime or extra hours).

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[9] "Total hours worked per week" was computed by adding 2nd job weekly hours and overtime hours (if any) to regularly scheduled weekly hours. "Average hourly wage" was computed by multiplying "total hours worked per week" by 50 workweeks, and then dividing the product by total annual earnings for all nursing-related employment. (Hourly wages = or < $9.00 per hour were eliminated from the analyses.)

Figure 23

Average Hourly Wages[a] for RNs Working Different Total Numbers of Hours per Week (8 Levels of Total Hours Worked[b]):
All Full Time In-Patient Hospital Staff RNs Working in NY State &
Full Time In-Patient Hospital Staff RNs Working in NY City

Hourly Wage by Hours Worked per Week,
All Full Time In-Patient Hospital Staff RNs Working
in NY State

Hourly Wage by Hours Worked per Week,
Full Time In-Patient Hospital Staff RNs
Working in NY City
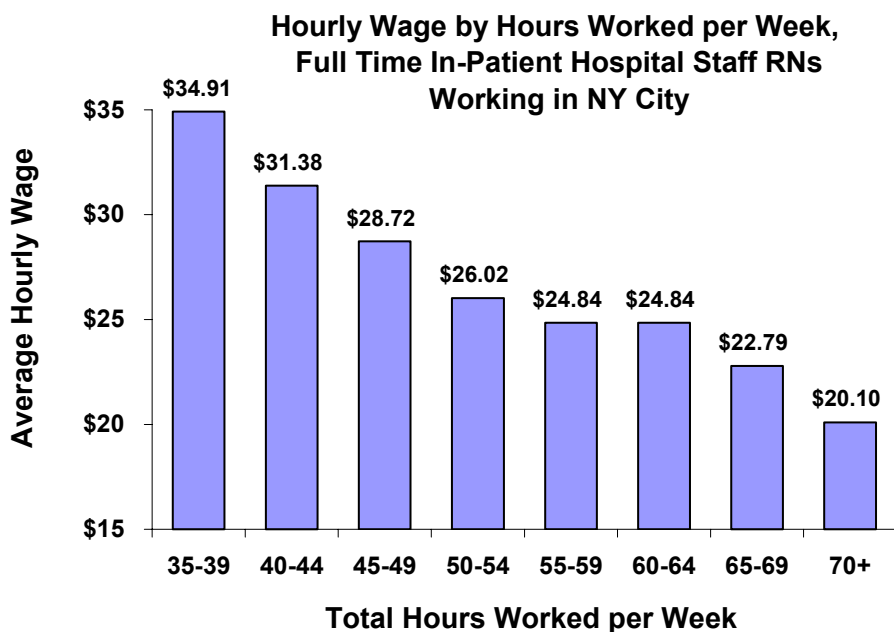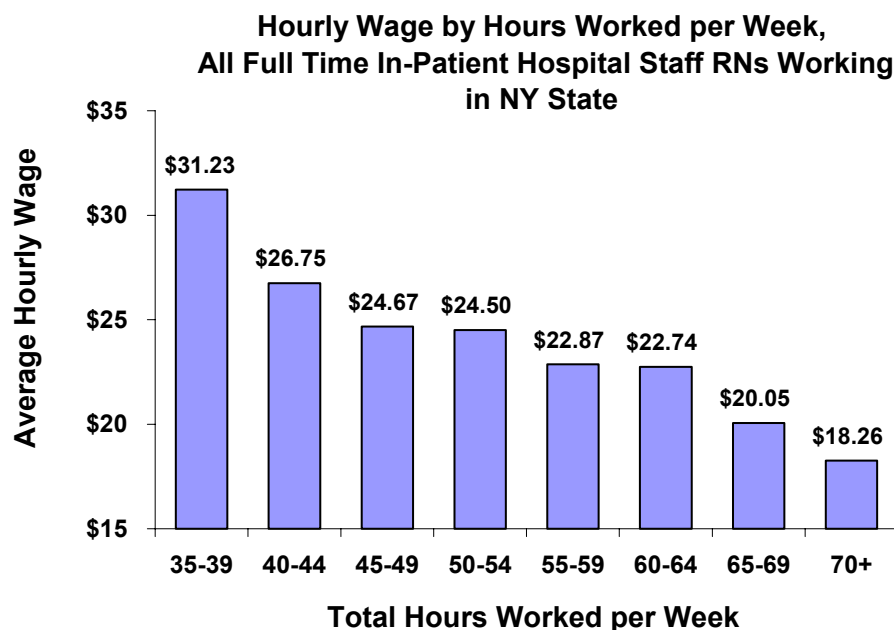
[a]"Average Hourly Wage" was computed by multiplying "Total Hours Worked per Week" by 50 workweeks, then dividing total annual earnings for all nursing-related employment. (Hourly wages at or below $9.00 per hour were eliminated as suspect outliers.)

[b]"Total Hours Worked" was computed by adding 2nd job(s) weekly hours and overtime weekly hours to regularly scheduled full time weekly hours.

The bottom chart in Figure 23 shows the same data but restricted to in-patient hospital staff nurses working within the New York City, 5-borough area, only. This restriction permits us to control for the major professional wage-cost differences that exist among regions – which might mask or suppress the true strength of this underlying relationship. As can be seen, the strength of the relationship between hourly wage and hours worked emerges more clearly – the magnitude of the correlation coefficient increases from -.40 to -.55, an increase reflected by the steeper "slope" of the bars in the bottom chart compared to the top chart.

This same histogram also shows that the average hourly wage of full-time NYC in-patient hospital staff RNs who work less than 40 hours per week (and so do not choose to work extra jobs or overtime) is $34.91 per hour. The average hourly wage of full-time NYC in-patient hospital staff RNs whose workweek is 70 hours or more per week is $20.10 per hour, less than 60 percent of the hourly wage of their NYC staff-nurse colleagues who do not work additional hours per week beyond their regularly scheduled full-time work hours.

Two hypotheses might help account for the repeated pattern of increased workweek hours corresponding to lower hourly wages observed in the data presented above. First, among RNs working in large-scale formal organizational settings (like hospitals), those holding the lower-paid staff nurse positions are the most likely to be subject to extra-hours and overtime scheduling; and second – that it is the younger, less-senior RNs who are earning lower hourly wages on experience-based pay scales who are also the most likely to be subjected to seniority-based mandatory overtime assignments. The fact that the strength of the negative association between hourly wage and total hours worked increases from -.32 for all NYS RNs to -.40 for NYS in-patient hospital RNs is consistent with the first hypothesis. As for the second hypothesis, however, further analyses reveal that the correlations between "years worked in current job" and "total hours worked per week" are either negligible or slightly negative.

Based on the analyses discussed above, the extra hours worked per week by RNs earning lower hourly wages do not appear to be the result of "mandatory overtime" practices due to lack of seniority. In fact, the correlation between RN's dichotomous status (yes/no) for OT work "always mandatory" and the total hours they work per week is not only statistically insignificant (-.036) but *negative*, i.e., the mandatory OT group reports working fewer total hours per week, on average, than do other nurses. The evidence is consistent with a more fundamental hypothesis: RNs earning a lower hourly wage *choose* to work significantly more hours per week than better-paid nurses because they feel they need the money.

Hours Worked per Week and the Frequency of Experiencing Great Stress

Obviously, low wages per se have significant labor-market effects. Certainly, they discourage new entrants into the profession, particularly in the face of increasingly attractive job alternatives. They may also provide a significant inducement to RNs in in-patient staff nurse roles to seek employment in other nursing roles within the hospital setting.

There is one other equally important implication of the moderately strong negative hourly wage and total workweek hours relationship. The more hours RNs work per week, the more frequently they experience great stress on the job. Since "stress" is categorically the number one reason in-patient hospital staff nurses give for leaving the nursing profession, compensation levels must be addressed as a key concern if we hope to enhance a true culture of retention in these settings. Failure to do so will continue to mean that talented professionals will abandon these types of roles at substantially younger ages than RNs working in less-stressful environments. Proof of this point is illustrated in Figure 24. This chart graphically illustrates the relationship between the number of hours RNs work per week and the frequency with which they report experiencing "great stress" on the job. The chart shows this relationship for the population of all RNs working as nurses in New York State.[10]

The "frequency of experiencing great stress" scale score is based on the responses RNs gave to the following question: "In your current job, how often do you feel under great stress?" 1) "never"; 2) "less often than once a week"; 3) "once or twice a week"; 4) "several days a week"; or 5) "almost every day." The data illustrated in Figure 24 shows that NYS nurses working less than 35 hours per week experience stress, on the average, only "once or twice a week" (average stress-frequency scale score = 3.11). As nurses work additional hours per week, their frequency of experiencing great stress moves up incrementally to "several days a week" (average stress-frequency scale score = 4.03).

Since few respondents reported "never" experiencing great stress on the job, this was effectively a four-point scale. In fact, the response given most frequently by in-patient hospital staff RNs was "5," "almost every day." This was also the most frequent (modal) response given by in-patient hospital nurse managers and by the "other" group of in-patient hospital RNs to the same question. In stark contrast, the most frequent response given by nurses not working in in-patient hospitals was "3," "once or twice a week." Substantively, then, the incremental increase of one "stress" scale point attributable to additional hours worked per week is quite significant, and not just "statistically" significant.

In summary, the frequency of great stress experienced by RNs increases with workweek hours, particularly when shouldering the burden of working substantially more than 40 hours a week. Since previous data also suggest that RNs may "elect" to shoulder these extensive work hours less by choice than out of financial necessity, the implications for retention may be highly negative.

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[10] The reason the data presented in Figure 24 is for "all working NYS RNs", rather than just for in-patient hospital staff nurses, is because the *average* "frequency of great stress" scale score for in-patient staff nurses is 3.9, already at the high end of the stress range for the total NYS population of working RNs. In fact, the distribution of responses for in-patient hospital staff RNs to this "frequency of stress" question is so "constricted" at the upper end of the scale (60 percent selected either "4" or "5") that there is not enough "variability" within their distribution of responses to reflect with sensitivity the added contribution of "total hours worked per week" to their frequency of experiencing great stress on the job.

Figure 24
Total Hours Worked per Week and Average "Frequency of Great Stress" Scale Scores[a]: All RNs Working in NYS

Total Hours Worked and Frequency of Great Stress

Total Hours Worked per Week	Average "Frequency of Great Stress" Score
Under 35	3.11
35-39	3.60
40-44	3.62
45-49	3.88
50-54	3.88
55-59	3.91
60-64	3.97
65 & Up	4.03
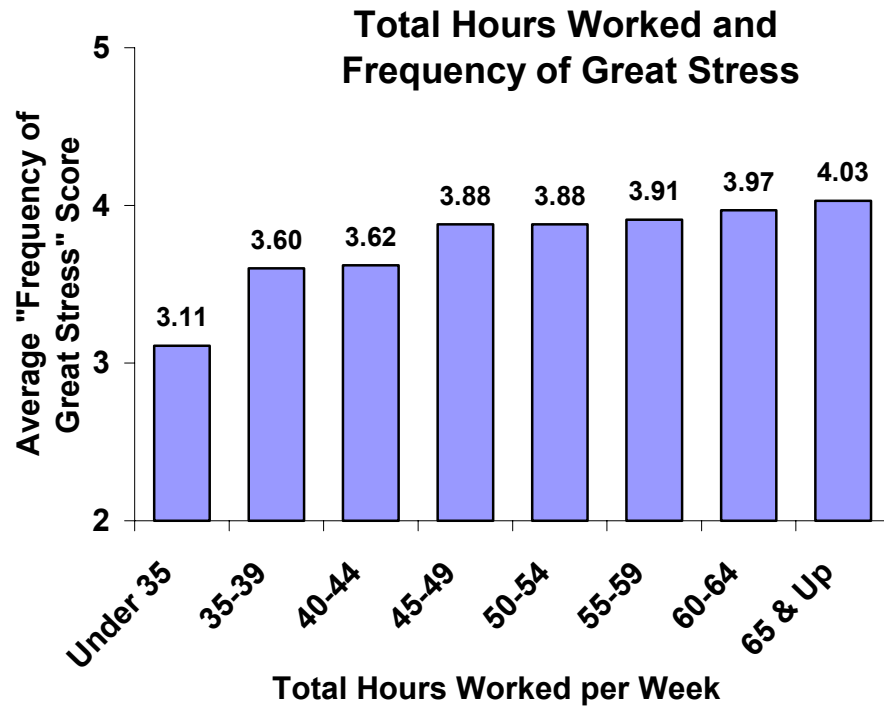
[a]"Frequency of Great Stress" Scale Scores range from "1" = "Never" to "3" = "Once or twice a week" to "5" = "Almost every day".

JOB STRESS, JOB CLIMATE, AND JOB SATISFACTION SCALES

Job Stress

A periodic finding throughout this Supplement has been that in-patient hospital nurses, especially staff nurses and their managers, report experiencing extraordinarily high levels of stress. What we have shown is the remarkably consistent pattern of association between overtime practices, total hours worked, and the frequency of exposure to high feelings of stress. What we have not done, however, is to flesh out the clear causal links between the levels of stress experienced, and other consequences such as increased job dissatisfaction, and significantly increased likelihood of choosing to leave the field of nursing at a prematurely early age among in-patient staff nurses.

One way of understanding this issue is to compare the response profiles of our four comparison groups – in-patient hospital staff RNs, nurse managers, all other in-patient hospital RNs and all other RNs working outside of in-patient hospitals, working in NYS – to the question "How often do you feel under great stress?" Figure 25 compares and contrasts the response distributions to this direct query.

Figure 25
Frequency of Experiencing Great Stress Survey Question: Distribution of Responses for NYS In-Patient Hospital Staff RNs, Nurse Managers, All Other In-Patient Hospital RNs, and All Other NYS Working RNs
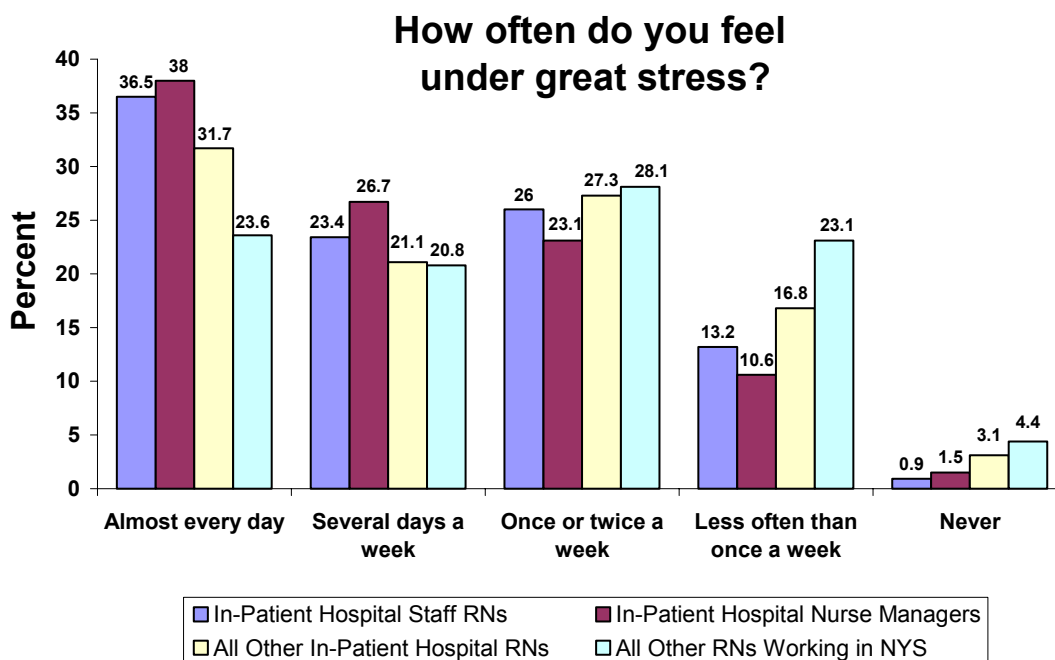
As the bars in Figure 25 make clear, while frequent stress characterizes the jobs of most nurses, nurses working within in-patient hospitals in New York State are subjected to "great stress" with far greater frequency than other RN groups. Indeed, 38 percent and 36.5 percent of nurse managers and staff RNs, respectively, reported experiencing great stress on the job "almost every day." These figures stand in contrast

to the far lower 23.6 percent figure for RNs working outside of the in-patient hospital sector. In fact, *the "almost every day" response was the "modal" high stress occurrence among all three groups of RNs working in the in-patient hospital environment.* In contrast, the modal frequency-of-great-stress experience for nurses working outside the hospital setting was "once or twice a week."

If we collapse the frequency-of-great-stress responses by merging "almost every day" and "several days a week" responses, a chilling 65 percent of nurse managers and 60 percent of staff RNs report experiencing great stress on the job at least several days a week. This stress-occurrence finding contrasts with the more moderate 44 percent of nurses who experience the same high frequency of great stress in non-hospital settings. Looking at the "lower stress" right-hand side of the bar chart, only 12 percent of nurse managers and 14 percent of staff nurses said they experienced great stress "less often than once a week" or "never," whereas almost 28 percent of RNs working outside of the in-patient hospital sector experienced this more fortunate, less stressed, work situation.

In Figure 26 we extend this analysis of the "stress experience" among the four comparison groups by reporting average stress scale scores for three different stress scales, namely, the frequency-of-great-stress scale, the workload-stress scale,[11] and the resource-stress scale.[12] These three average scale scores demonstrate the same pattern discussed above, i.e., in-patient hospital RNs, especially nurse managers and staff nurses, are subjected to substantially more stress than are nurses working in different settings.

The workload-stress scale, unlike the frequency-of-great-stress scale, is a measure of how "fast" or how "hard" the respondent had to work in their current job assignment in order to complete their assigned work in the allotted time. In a sense, depending upon a respondent's scale position, this measure can also be viewed as a measure of role overload. The work-load stress scale confirms what we have already seen regarding the especially high levels of job stress experienced by in-patient hospital staff nurses and nurse managers. Just as importantly, further analyses revealed that, of the nine measures of organizational climate captured in this study, the stress-frequency and workload-stress scale scores correlate more highly than any other scale scores with in-patient hospital staff RNs' intentions to leave their current job (but remain in the nursing profession).

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[11] Based upon survey questions 22 to 25.

[12] Based upon survey questions 26 to 28.

Figure 26
Job Climate Stress Average Scale Scores:
In-Patient Hospital Staff Nurses, Nurse Managers, All Other In-Patient Hospital RNs
and All Other RNs Working in NYS compared

Job Climate Stress Average Scale Scores
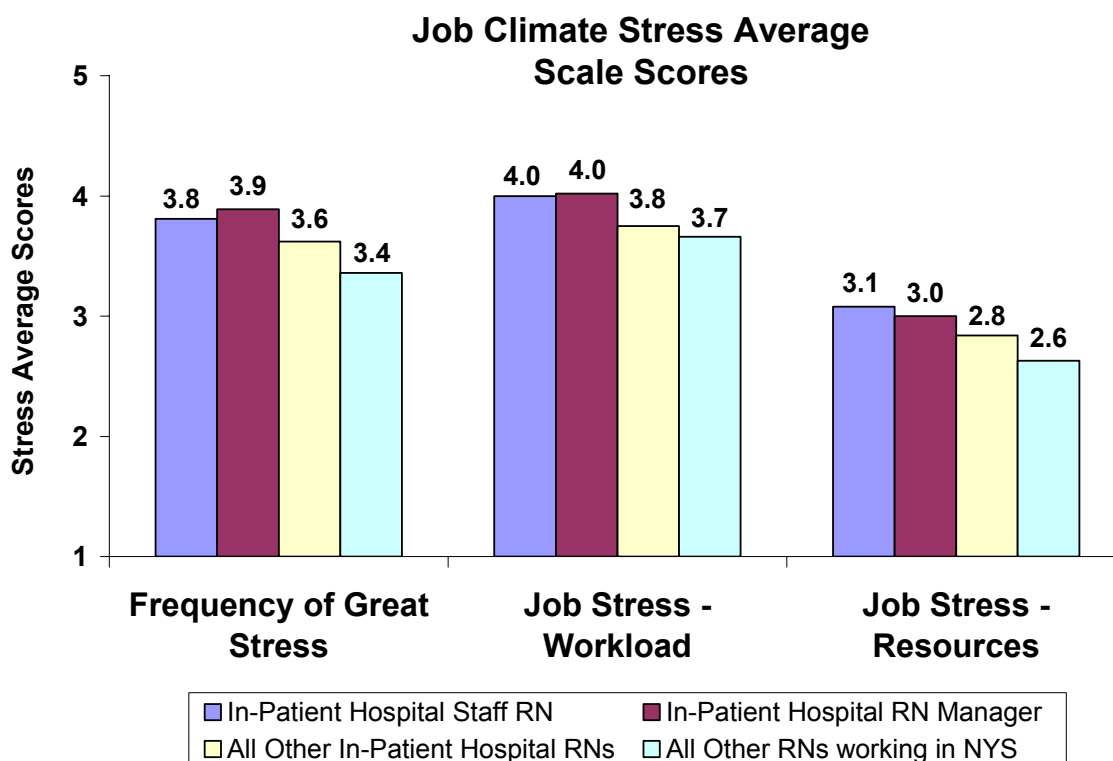
The third stress measure highlighted in Figure 26 taps a very different aspect of job stress, namely, the stress induced by a lack of resources to do the job properly. Specifically, respondents were asked if they had sufficient access to supplies, equipment and room to do their jobs. Scale scores for this particular measure indicated that RNs across the board were less stressed by their access to resources than by other aspects of their jobs. However, the same inter-group patterns prevailed. That is, both in-patient hospital staff RNs and managers reported significantly greater resource-stress than did nurse respondents employed elsewhere. Still, the most telling aspect of these findings is that all nurses registered far greater concern over the lack of time to get their job done than they did about the lack of resources.

ORGANIZATIONAL CLIMATE: WORKPLACE CONDITIONS THAT TEMPER OR EXACERBATE THE STRESS EXPERIENCE

Throughout the nursing study, the research team has been guided conceptually by the Price-Mueller model of voluntary turnover. That model has been thoroughly described in Volumes I and II of this study, and in particular in Appendix B. The Price-Mueller model basically posits a variety of organizational climate conditions as conducive (or not) to job satisfaction and organizational commitment, and these latter variables in turn are seen as ultimately affecting a nurse's decision to stay in, or exit, their job and the timing of that decision. In this section, we highlight some of the basic differences in organizational climate that characterize the work life of RNs in in-patient hospital settings in contrast to their non-hospital based peers.

Job Climate Scales

Figure 27 displays the six job climate scale average scores for each of the four comparison groups. The scale scores are arranged in order from the highest to the lowest average scale scores for in-patient hospital staff nurses. These six climate scales are: 1) "RN-RN Interaction; 2) "Instrumental Communication" (the degree to which respondents feel "well informed" by management; 3) "RN-Physician interaction"; 4) "Autonomy"; 5) "Satisfaction with Pay"; and 6) "Promotional Opportunity." Each of the scale scores could range from a possible low of "1" to a possible high of "5."

For all the climate scales except autonomy, a lower score corresponds to greater dissatisfaction and a higher score to greater satisfaction. The autonomy scale measured the extent to which respondents evaluated their job as providing them with more or less autonomy to make decisions. A higher or lower score on this scale does not as clearly correspond with greater or lesser satisfaction with the dimension. As will be discussed below, many staff nurses indicated that they would prefer *less* autonomy – these nurses indicated that the responsibility of making potentially "life or death" decisions on their own is a stressful burden to bear.

Figure 27 reveals that five of the average climate-scale scores of in-patient hospital staff RNs were significantly lower than the comparable scores of nurses *not* working within in-patient hospitals. Promotional opportunity was the only climate scale for which staff RNs average score was slightly higher than the average score of the comparison group of RNs working in other settings. This apparent anomaly may in fact be due to both the substantially younger average age of staff RNs working within in-patient settings (who therefore see themselves as less subject to salary ceilings often directly affecting more experienced professionals), as well as the fact that large-scale facilities (300-bed plus) may structurally provide somewhat greater promotional opportunity than other types of work situations.

The average scale scores of staff RNs were consistently lower than all six of the average scale scores of their direct supervisors – in-patient hospital nurse managers. The most notable discrepancy between these two in-patient RN groups is seen in their perceptions of the degree of autonomy they have in their jobs (to be discussed further below). When compared to the group of "all other in-patient hospital RNs," staff nurses once again have significantly lower average scores, except for their scores on two

measures – "RN-RN Interaction" (both groups "tie" for the lowest average score of 3.7) and "RN-Physician Interaction" (3.0 for "other" group compared to 3.1 for staff nurses).

Figure 27

Job Climate Satisfaction Average Scale Scores[a]: In-Patient Hospital Staff RNs, Nurse Managers and All Other In-Patient Hospital RNs Compared[b] to All Other Nurses Working in NYS

Job Climate Scale Means, Three Groups of In-Patient Hospital RNs Compared to All Other RNs working in NYS
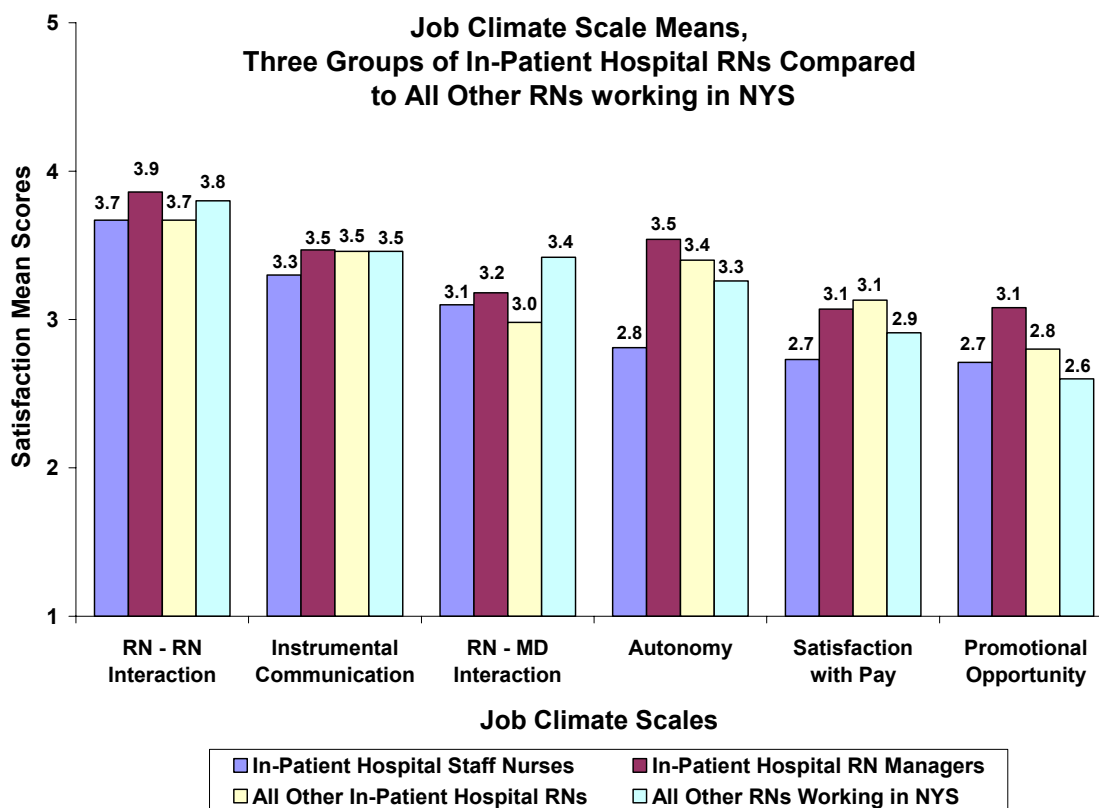
[a]Satisfaction job climate scale scores range from "1" = "low satisfaction" to "5" = "high satisfaction".

[b]"RN-RN Interaction" eta = .077, "Instrumental Communication" eta = .103, "RN-MD Interaction" eta = .175, Autonomy eta = .310, "Satisfaction with Pay" eta = .085, "Promotional Opportunity" eta = .111

Nurse-Physician Interaction

All three groups of nurses working within the in-patient hospital setting report the nurse-physician interaction as less satisfactory than RNs working in other settings. It may well be the case that, as the criticality of patients' needs become more acute (a paramount feature of patient caseloads within in-patient hospital settings) RN-Physician interactions become more strained. Interestingly, as noted above, the "other in-patient hospital RN" group had the lowest average nurse-physician interaction rating of all three in-patient nursing groups. This group consists largely of older, highly educated and more specialized nurses (including nurse anesthetists) who – unlike staff nurses - place a premium on having autonomy within their jobs and may expect more professional respect.

Promotional Opportunity

All three groups of RNs working within in-patient hospitals were more satisfied with their promotional opportunities than nurses working outside that setting. The larger volume of RNs found within in-patient hospitals (most of whom work in "large" hospital facilities of 300 beds or more) may result in a promotional hierarchy for RNs not found in other settings. Nevertheless, it is also the case that for all four comparison groups, *the level of satisfaction expressed for promotional opportunity is still substantially lower than the level of satisfaction expressed for any other aspect of organizational climate* (though for staff RNs and managers, satisfaction-with-pay and promotional opportunity are "tied" for the lowest score). All four groups of RNs are more dissatisfied with their pay and promotional opportunities than with any of the other four job-climate dimensions measured by the scales. This finding is especially important considering that, for all groups except the 340 RN manager respondents, *lack of promotional opportunity correlates more highly with plans to leave the nursing profession than any other climate scale score.*

Autonomy

Autonomy is the job dimension for which the job climate average scale scores showed the most disparity among the four comparison groups of working NYS nurses. As shown in Figure 27, the autonomy average scale score is lowest, by far, for the in-patient hospital staff nurse group, compared to average autonomy scores of 3.5, 3.4 and 3.3 respectively for nurse managers, other in-patient hospital RNs, and all other RNs. Thus, in-patient hospital staff RNs perceive themselves as having considerably less autonomy in the performance of their jobs than other nurses both inside and outside of the in-patient hospital setting.

The questions comprising the autonomy scale measured the extent to which respondents felt they had a "say over what happens on your job" (survey question 29), "freedom… as to how you do your job" (question 30), "a part in decisions that affect you" (question 31), invitations "to serve on administration committees" (question 33), and empowerment "to make patient care decisions" (question 34, for respondents in a direct patient care job, only). Unlike the other five scales, *the autonomy scale can only be said to measure a dimension of job satisfaction if, in fact, the respondent desires autonomy.*

Autonomy and Work Satisfaction

In Figure 28, we highlight findings which show what percentage of RNs within each of our four comparison groups ranked five distinct job dimensions "most important" to their overall job satisfaction. One of the dimensions rated was the autonomy dimension. Unlike other scale scores or rankings, these percentages were derived from responses to survey question 82, a question presented in a paired-comparisons format. Five job dimensions related to job satisfaction – compensation, autonomy, recognition, technology and third party payment – were presented for respondent evaluation as ten "pairs" (encompassing all possible combinations of two of these factors). Respondents ranked a job dimension as "most important" if they preferred that dimension four out of the four times it was presented (within a "paired comparison" choice set) for evaluation.

Figure 28
Percent of RNs (within Each Comparison Group) Ranking Each of
Five Job Dimensions as the Most Important for Their Own Job Satisfaction:
In-Patient Hospital Staff RNs, Nurse Managers & All Other In-Patient Hospital RNs
Compared to All Other Working NYS RNs

Percent of RNs Ranking Dimension as Most Important for Their Job Satisfaction (Out of Five Choices)

Legend:
- In-Patient Hospital Staff RNs
- In-Patient Hospital Nurse Managers
- All Other In-Patient Hospital RNs
- All Other RNs Working in NYS
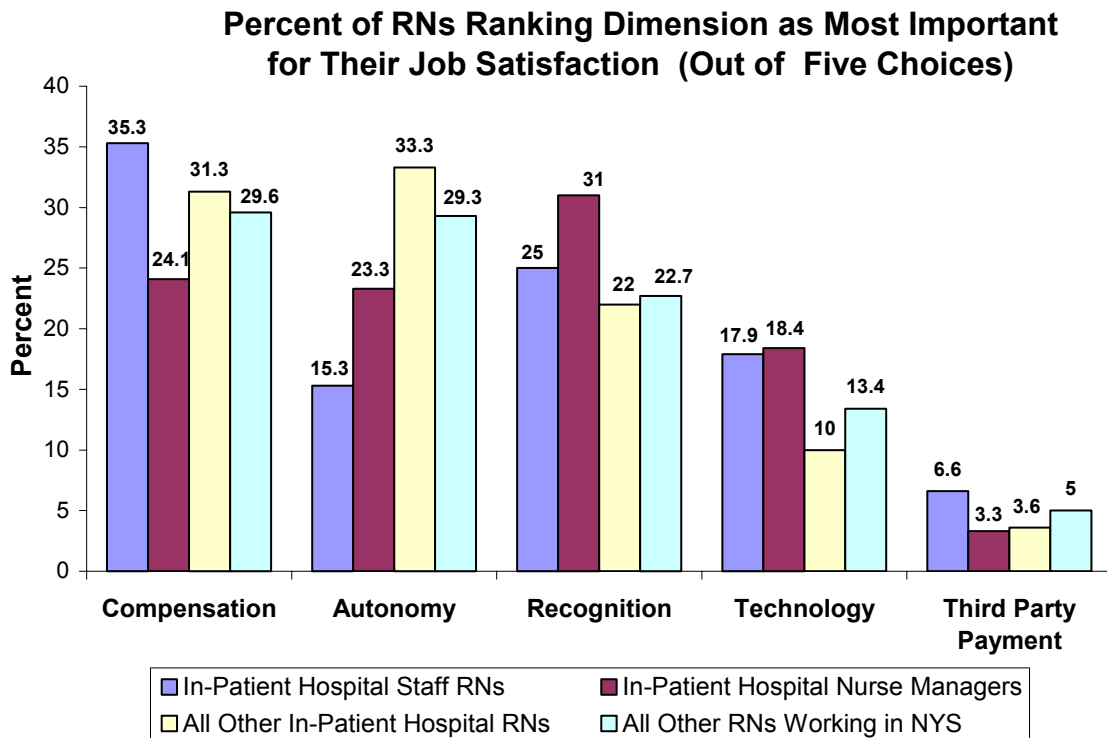
The average job climate scale scores for autonomy shown earlier in Figure 27 can be more clearly interpreted in concert with the #1 job satisfaction dimension percentages shown in Figure 28. It is true that in-patient hospital staff RNs report having considerably less autonomy in the performance of their jobs than do other RNs. However, as this chart makes clear, they also accord substantially less importance to autonomy when ranking job dimensions they consider most important to their job satisfaction. Indeed, some letters sent to us with the returned surveys provided real insight about how, especially in critical-care circumstances, too much autonomy can result in making an in-patient hospital staff nurse's job more stressful and less satisfying.

Presenting a very different profile than hospital staff nurses in this regard, the older, more highly educated and more specialized group of "other in-patient hospital RNs" rank autonomy as the factor most important to their job satisfaction significantly more frequently (33.3 percent) than any of the other three groups.

JOB SATISFACTION, ORGANIZATIONAL COMMITMENT, JOB OPPORTUNITY AND SEARCH BEHAVIOR

Based upon the "Price-Mueller" model of employee turnover discussed at length in Chapters 1, 2, 3 and 4 of Volume II, an employee's perception of her/his job climate is hypothesized to have direct effects upon both an employee's job satisfaction and organizational commitment. These latter variables act as mediating variables, which in turn, affect job search and timing-to-exit decisions. In short, based on the Price-Mueller model, low levels of job satisfaction and commitment, coupled with perceived high job-opportunity levels, are hypothesized to result in heightened "job search" behavior and consequently employee turnover.

Figure 29 displays average scale scores for measures of each of these factors – job satisfaction, organizational commitment, job opportunity (local and general) and job search behaviors. The data shown generally confirm the Price-Mueller model. In-patient hospital staff RNs are both significantly less satisfied with their jobs than other RNs and express a substantially lower level of organizational commitment. On the other hand, in-patient hospital staff nurses perceive a considerably higher level of job opportunity for themselves elsewhere, both locally and generally, than do other nurses. As predicted by the Price-Mueller model, staff nurses' lower level of satisfaction and commitment and higher expectation that they could find as good or better a job elsewhere results in a heightened level of job search behavior compared to other nurses. (The data in Tables 11 and 12, discussed later in this Supplement, does, in fact, demonstrate that in-patient hospital staff nurses are planning to leave their jobs and/or the nursing profession with greater frequency, and at a younger average age, than are other nurses.)

The average scale scores shown in Figure 29 indicate that of the three in-patient hospital RN comparison groups, *only* staff nurses are less satisfied with their jobs than are nurses working outside of in-patient hospitals. The other two in-patient hospital comparison groups – nurse managers and "other in-patient hospital RNs" – are even slightly *more* satisfied with their jobs, on the average, than RNs working outside that setting (eta = .133, significance level <.001).

Figure 29

Job Satisfaction, Job Opportunity, and Job-Search Behavior Average Scale[a] Scores: In-Patient Hospital Staff RNs, Nurse Managers, and All Other In-patient Hospital RNs Compared[b] to All Other RNs Working as Nurses in NYS

Job Satisfaction, Opportunity, and Search Behavior Average Scale Scores
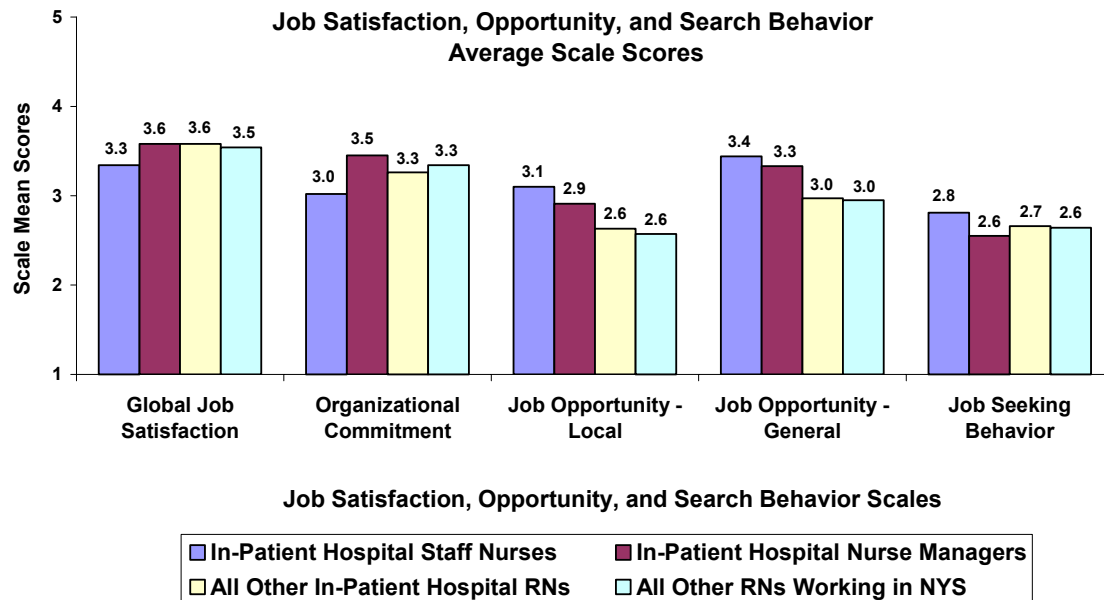
[a]All Scales ranged from "1" = "Low" to "5" = High.

[b]"Job Satisfaction" eta = .133, "Organizational Commitment" eta = .198, "Job Opp. L" eta = .217, "Job Opp. G" eta = .192 "Search Behavior" eta = .078; All ANOVA comparisons of means results significant at .000 level.

What makes this finding especially noteworthy is that, as discussed above, *all three* in-patient hospital comparison groups – staff nurses, managers and "others" – report experiencing "great stress" on the job substantially more often than do all other RNs. In other words, nurse managers and "other" in-patient hospital RNs are more frequently severely stressed on the job than are nurses working outside of in-patient hospitals, but are also, on the average, more satisfied with their jobs. The frequency-of-great-stress scale and global job satisfaction scale clearly measure correlated (-.361), but far from identical, work experiences.

Reporting the lowest level of global job satisfaction is what most sets in-patient hospital staff RNs apart when compared to nurses working in every other job title and setting. (Of the 17 different job titles held by the survey respondents, only a very small group [N = 39] identifying themselves as "claims adjusters" had a slightly lower job satisfaction average scale score [3.2 compared to 3.3]). It is the frequency-of-great-stress scale measure, however, that sharply distinguishes all in-patient hospital RNs (not just staff RNs) from RNs working within other settings. Only directors of nursing (N = 225), directors of nursing education (N = 22), and nurse managers (N = 651) working outside of the in-patient hospital setting reported average frequency-of-great-stress and workload-stress scores that could be considered comparable to the enormous levels of stress reported by the 4,758 survey respondents working within the in-patient hospital setting.

The data displayed in Figure 29 shows that the lower level of job satisfaction reported by in-patient hospital staff RNs, compared to all other RNs, is also mirrored by their lower level of organizational commitment. In contrast, nurse managers expressed a significantly higher average level of organizational commitment compared to other RNs. Even though nurse managers, like staff nurses, perceive a greater level of job opportunity for themselves compared to most other RNs, nurse managers are *less* likely to engage in job-search behaviors than are most other RNs. According to the Price-Mueller model, this diminished likelihood of seeking employment elsewhere follows from nurse managers' higher level of organizational commitment. (Correspondingly, the data in Tables 11 and 12, to be discussed below, demonstrate that nurse managers younger than 52 years of age are planning to leave their jobs and/or the nursing profession within the next five years with far *less* frequency than are most other RNs.)

The average scale scores displayed in Figure 29 are very similar for the "other" group of in-patient hospital staff RNs and for the group of "all other RNs working in NYS." They report similar levels of job satisfaction, organizational commitment, perceived job opportunities and job search behaviors. These two groups have already been shown to be similar along a number of dimensions: their age distributions are similar with substantially higher average ages compared to the other two comparison groups, their percentages of ethnic minority representation are low, and membership in either of these "other" groups, each consisting of a diversity of job titles, decreases the likelihood of working on an overtime basis. Still, in spite of these similarities, the pattern of "stress" differentiating in-patient hospital RNs from other RNs holds true for these two groups. The three job-stress score averages (shown in Figure 26) are significantly higher for the in-patient hospital "other" group than for the group of "all other RNs working in NYS." The difference in "stress" scores between these two generally similar groups is less marked, however, than between the very high average stress levels of in-patient hospital nurse managers and staff nurses and the (relatively) lower average stress levels of all RNs working in other settings.

Which Job Climate Factors Contribute Most to Job Satisfaction for In-Patient Hospital Staff RNs Compared to All Other RNs?

To help answer this question, simple bivariate correlations between survey respondents' organizational climate ratings for nine different job climate scales and their overall or "global" job satisfaction scale ratings were examined. Figure 30 below illustrates these correlations in the form of a bar chart. Each group of four bars represents the magnitudes of the correlations between a job-climate scale and global job satisfaction for each of the four comparison groups – in-patient hospital staff RNs, in-patient hospital nurse managers, all other in-patient hospital RNs, and all other RNs working in NYS (*outside* of the in-patient hospital setting).

The climate scales are arranged from top to bottom in the chart based upon the strength of their association with global job satisfaction for in-patient hospital staff RNs. In other words, the magnitudes of the correlation coefficients between each of the climate scales and job satisfaction for in-patient staff RNs are labeled at the end of each "in-patient hospital staff RN" bar and arrayed so those coefficients appear in descending order of magnitude. Consequently, the first bar in each set of comparison groups gets

progressively shorter as the strength of this association declines among in-patient staff nurses (when reading downward through the bars shown in Figure 30).

Figure 30

Magnitudes[a] of Correlations of Job Climate Scale Scores with "*Job Satisfaction*": In-Patient Hospital Staff RNs, Nurse Managers & All Other In-Patient RNs, compared to All Other RNs Working in NYS
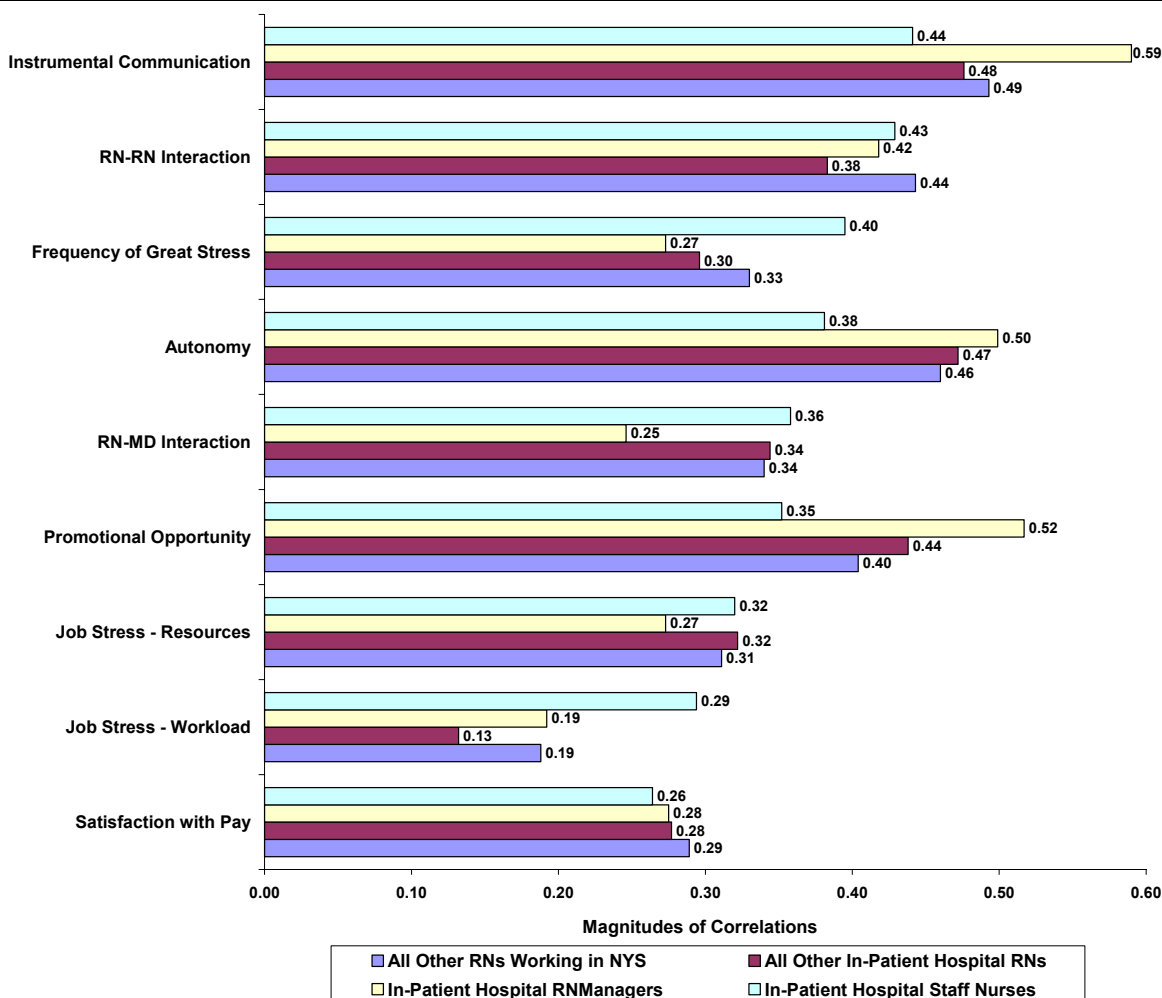
[a]Only correlation magnitudes are shown, not whether the correlations are negative or positive. As expected, correlations of Job Satisfaction with the three stress scales (Frequency, Workload, and Resources) are negative. All other correlations are positive. All correlations are statistically significant at the .000 level.

Note that the bars depicted for the other three comparison groups in each set, however, do *not* get progressively shorter, at least not consistently, when scanning down the bar chart. The fact that the other three bars exhibit different relative lengths as one moves from one climate scale to the next means that different job climate factors are differentially important to job satisfaction for different groups of RNs. In spite of these inter-group differences, however, some aspects of organizational climate are consistently more strongly associated with job satisfaction than other scales. In particular, for all four groups "instrumental communication" and "nurse-nurse interaction" are ranked near the top in the strength of their relationship with job satisfaction, while workload-stress, and satisfaction-with-pay are ranked near the bottom.

There are four job-climate scales for which the magnitudes of the correlations with job satisfaction among in-patient hospital staff RNs differ substantially from the magnitudes of those coefficients within each of the other three groups. These four climate scales are: 1) frequency-of-great-stress; 2) autonomy; 3) promotional opportunity; and 4) workload-stress. The differential "weight" these climate factors have for the job satisfaction of in-patient hospital staff RNs compared to other RNs is represented graphically within the Figure 30 bar chart.

For in-patient hospital staff RNs, the magnitude of the correlation between frequency-of-great-stress and job satisfaction (-.40) ranks third, ahead of autonomy and nurse-nurse interaction.[13] For the other three comparison groups, the correlation between frequency-of-great-stress and job satisfaction is significantly lower, -.27 for nurse managers, -.30 for "other in-patient hospital RNs" and -.33 for "all other RNs working in NYS." For each of these three groups, other job climate scales rank much higher in their relative contribution to predicting RN job satisfaction than does the frequency-of-great-stress scale. For example, for each of the groups other than in-patient hospital staff RNs, autonomy and promotional opportunity correlate much more highly with job satisfaction than does frequency-of-great-stress.

Correspondingly, the magnitudes of the correlation coefficients measuring the strengths of the relationships between autonomy and job satisfaction and between promotional opportunity and job satisfaction are much lower for in-patient hospital staff RNs than for the other three groups of RNs. Taken together, this data makes a compelling case that the much higher levels, and much greater frequency, of stress experienced by in-patient hospital staff nurses compared to other NYS nurses (see Figure 27 above) impacts severely upon their job satisfaction. Other RNs also report experiencing substantial stress, but not so much so that it over-rides the importance of meeting their "higher level" needs, needs more related to personal growth and professional development, when assessing their job satisfaction. For in-patient hospital staff RNs, an endurable level of stress appears to be a far more important correlate of job satisfaction than more traditional organizational climate dimensions, such as promotional opportunity and autonomy. Indeed, the latter dimensions may be "nice to have" while a lower-stress environment is seen as indispensable to job satisfaction. Thus, these other climate scales do not correlate as highly with in-patient staff RNs' job satisfaction as they do for other nurses.

The magnitude of the correlation between workload-stress and job satisfaction is also much higher for in-patient hospital staff nurses than for other NYS nurses, probably also for the reasons cited above. "Stress" is a defining experience for the job of in-patient hospital staff nurse, and the extent to which it is manageable is therefore a major

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[13] The three stress scales, frequency-of-great-stress scale, resource-stress and workload-stress, have a *negative correlation* with job satisfaction, i.e., the correlation coefficient has a negative value because as stress *increases*, job satisfaction *decreases*. For the purpose of this discussion, however, only the *magnitude* of the correlation coefficient is important in assessing the relative "weight" of the factor in contributing to job satisfaction, not whether the "sign" of the coefficient is negative or positive.

correlate of job satisfaction. Why, then, is workload-stress ranked so low among the correlates of job satisfaction, even for in-patient hospital staff nurses?

Almost all respondents, regardless of job title, reported high levels of workload-stress. Less than 5 percent of respondents had scale scores on this measure below the "neutral" level, indicating that they were not especially stressed by their workload, i.e., they did not have to work very hard and fast at their jobs in order to get everything done. Because the scale scores of almost all respondents were between "3" and "5," this "restricted range" of responses and highly "skewed" distribution certainly dampened the magnitude of the computed correlation coefficient.

Another explanation for this scale's relatively low correlation with job satisfaction was suggested by some marginal notes written next to the workload-stress questions on the returned surveys. Respondents wrote that almost all nurses work hard and fast and were proud to do so – the range of responses that could be selected for the "workload" questions, these respondents argued, did not adequately allow them to express the frustration of having far more work to do than they could accomplish at a minimal level of competence in the time allotted. In other words, a high score on this scale did not necessarily distinguish between those nurses who work hard and fast but are not overwhelmed by their workload, and those nurses who work hard and fast and are nevertheless overwhelmed. A score of "5" on the frequency-of-great-stress scale, on the other hand, indicating that the respondent experienced "great stress" on the job "almost every day," provided a higher "ceiling" for responses, and so permitted the differentiation of respondents who are somewhat but "manageably" stressed by their jobs from those who are severely stressed by their jobs.

The relatively lower correlation of autonomy with job satisfaction for in-patient hospital staff RNs compared to all other RNs corresponds with the data presented in Figures 28 and 29 and discussed earlier in this Supplement. In-patient hospital staff nurses report having less autonomy in the performance of their jobs than do other RNs, but they also assign autonomy a lower rank than do other RNs when prioritizing factors contributing to their job satisfaction. (See Volume II, Chapter 7: *RNs' Ratings of Factors Impacting Their Job Satisfaction*.) Some staff nurses wrote to us explaining that, in the high-stakes hospital environment, too much autonomy only added to their stress level because, if something should go wrong, their "autonomy" could translate into an opportunity to "blame the nurse."

Differences Between Staff Nurses and Nurse Managers

The great differences between the job-satisfaction correlation profiles of staff nurses and nurse managers are fascinating. For six of the nine job-climate scales, when the job-satisfaction correlations of the four groups of nurses are compared, nurse managers and staff nurses are at opposite ends of the continuum; if nurse managers have the highest correlation coefficient, staff nurses have the lowest, and vice versa. The correlations of job satisfaction with instrumental-communication, autonomy and promotional opportunity are higher for nurse managers, and lower for staff nurses than for either of the other two comparison groups. The correlations of job satisfaction with frequency-of-great-stress, RN-physician interaction, and resource-stress are higher for staff nurses, and lower for nurse managers, than for either of the other two groups.

Even though nurse managers and staff nurses have similar jobs, and work in similar environments, and even though nurse managers are generally promoted from the ranks of staff nurses, the job climate factors most important for their job satisfaction differ substantially. Nurse managers appear to value clear lines of communication with upper management, promotional opportunity, and autonomy far more than staff nurses. In contrast, the data implies that staff nurses' job satisfaction depends more heavily on manageable stress levels, getting along with physicians, and adequate resources to do the job.

The two "other" comparison groups once again show themselves to be more similar to each other than to in-patient hospital staff nurses or nurse managers. The job-climate scale satisfaction correlation profiles of the "other in-patient hospital RNs" and "all other RNs working in NYS" groups tend to be quite similar, and are in-keeping with the profile of correlations for all RNs working in NYS. That pattern of correlations is discussed extensively in Chapter 3 of Volume II.

THE INTENTIONS OF IN-PATIENT HOSPITAL RNS TO LEAVE THEIR CURRENT JOBS OR THE NURSING PROFESSION WITHIN THE NEXT FIVE YEARS

In survey questions 79 and 80 we asked respondents who were currently working in nursing, or who had left the profession within the past three years, about their timing-to-exit intentions, i.e., the time frames they envisioned, both for leaving their current jobs[14] and for leaving the nursing profession.[15] The response choices for these two survey questions were identical: 1) I have already left; 2) In the next 12 months; 3) In 1 to 2.9 years; 4) In 3 to 4.9 years; and, 5) Not for 5 years or more.

Logically of course, all nurses planning to leave the nursing profession within the next 5 years are also planning to leave their current nursing job within 5 years. Thus, for the purpose of this analysis, we distinguish between those nurses "planning to leave their current nursing job, only" (without planning to retire or leave the profession yet), and those who plan to exit the profession entirely in this time period. In addition, for the purpose of examining separately "RNs leaving the profession primarily for the purpose of retirement" and "RNs leaving the profession for reasons other than retirement," the four comparison groups used throughout this Supplement are further divided into "RNs 51 years of age or younger" and "RNs over 51 years of age."[16]

Tables 11 and 12 provide age and scale score data for RN respondents within each of the four comparison groups, but analyzed within two major age groupings – those younger than age 52, and those 52 or older – and two major leave-plan groupings

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[14] Drawn from Question 79.

[15] Drawn from Question 80.

[16] Responses to question 81 "Reasons for Leaving Nursing Profession" cannot be used to separate all RNs leaving within 5 years into two groups, those leaving for retirement reasons and those leaving for other reasons, because only RNs leaving within the next 12 months were requested to respond to survey question 81.

– those planning to leave their current job (only), and those planning to leave the nursing profession itself, within five years. The table displays average job satisfaction scale scores for the eight age-by-title groupings as well as their average frequency-of-great-stress scale scores. The information on the "under age 52" sides of these charts applies to the first set of analyses presented below, which examine correlations between job climate and satisfaction scales and RN respondents timing-to-exit plans for either their current jobs, only, or the nursing profession.

Timing to Leave

Data in Table 11 shows that 48.1 percent of in-patient hospital RNs under age 52 are planning to leave either their current jobs or the nursing profession within the next five years, compared to only 32.7 percent of nurse managers, 41.5 percent of "other" in-patient hospital RNs, and 42.4 percent of "all other RNs currently working in NYS." In other words, in-patient hospital staff RNs under the age 52, the least satisfied with their jobs of the four comparison groups examined, are planning to leave their jobs and/or the profession within the next five years at significantly higher rates than are nurses within the other three groups.

Table 11

Analysis of RNs < 52 Years of Age & RNs > or = 52 Years of Age,

Percent Planning to Leave Current Job, Only[a], Within 5 Years and Percent Planning to Leave the RN Profession Within 5 Years: In-Patient Hospital Staff RNs, RN Managers & All Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS

Job Title Category							Age is < 52 Years									Age is = or > 52 Years		
	N	Col. %	Ave. Age	Std. Dev.	Job Sat.[c]	Freq. Stress[c]	% Leaving Job, only < 5 Years[a]	% Leaving Nursing < 5 Years	% Leaving Job or Nursing < 5 Years[b]	N	Col. %	Ave. Age	Std. Dev.	Job Sat.[c]	Freq. Stress[c]	% Leaving Job, only < 5 Years[a]	% Leaving Nursing < 5 Years	% Leaving Job or Nursing < 5 Years[b]
In-patient Hospital Staff RNs	2,809	42.3	39.4	7.6	3.31	3.78	37.5	14.0	48.1	804	26	57.1	4.0	3.45	3.91	15.4	43.7	58.2
In-patient Hospital RN Managers	234	3.5	43.6	5.8	3.56	3.84	24.0	10.2	32.7	105	3.4	56.6	4.2	3.63	4.01	22.0	46.3	61.9
All Other In-Patient Hospital RNs	367	5.5	43.8	5.5	3.53	3.58	32.2	11.7	41.5	223	7.2	57.6	4.4	3.65	3.68	24.0	32.8	55.6
All Other RNs working in NYS	3,229	48.6	42.8	6.2	3.51	3.37	32.0	13.2	42.4	1,979	64	58.1	5.2	3.60	3.34	21.0	43.0	60.9
All RNs working in NYS	6,639	100	41.5	7.0	3.43	3.57	34.1	13.3	44.4	3,111	100	57.8	4.8	3.58	3.54	19.8	42.6	59.9
	68.1% of NYS RNs are < 52 years of age.									31.9% of NYS RNs are > or = 52 years of age.								

[a]"Leaving Job, only, < 5 Years" refers to respondents who indicated that they are leaving their current job within 5 years, and if they are also leaving RN profession, timing does not coincide.

[b]"Leaving Job, only" and "Leaving Nursing" column percentages add up to (overall) 4% more than "Leaving Job or Nursing" percentage because 4.0% of respondents indicated different "timing to exit plans" for job and profession, i.e, leaving job first, then profession.

[c] For RNs < 52 years: "Job Satisfaction" scores, eta = .133; "Frequency of Great Stress" scores, eta = .178. For RNs > 51 years: "Job Satisfaction" scores, eta = .092; "Frequency of Great Stress" average scores, eta = .214. All ANOVA results significant above the .000 level.

Nurse managers and the group of "other" in-patient hospital staff RNs (under age 52), who are at least as satisfied with their jobs, on the average, as are RNs working in settings other than in-patient hospitals, are planning to leave the nursing profession at the lowest rates compared to the other two groups. Nurse managers, who have most likely already been promoted from staff nurse to manager, are planning to leave their current jobs (only) at the lowest rate – only 24 percent are planning to leave their current jobs (but not the nursing profession) within the next five years, compared to

37.5 percent of staff nurses, 32.2 percent of all other in-patient hospital RNs, and 32.0 percent of all other RNs working in NYS.

Table 12 again shows that in-patient hospital staff RNs are "over-represented" among those RNs under 52 years of age who are planning on leaving their jobs or the nursing profession within the next 5 years. In-patient hospital staff RNs comprise 42.3 percent of the population of RNs working in NYS under 52 years of age, but represent 46.7 percent of the RNs planning on leaving their jobs (only) within the next five years, and 44.4 percent of all RNs planning on leaving the nursing profession. In comparison, the other three groups of RNs are all "under-represented" among RNs leaving their jobs or the profession.

According to data shown in Table 12 for RNs under age 52, the average age of in-patient hospital staff RNs planning to leave the nursing profession within five years is only 39.4 years of age – considerably younger than the average ages of nurses within the other three groups with similar timing-to-exit intentions (43.3 years for nurse managers, 45.2 for "other in-patient hospital RNs" and 42.8 for "all other RNs working in NYS"). The average age of all in-patient hospital staff nurses under age 52 is younger than the average ages of each of the other three groups but even so, the substantially younger average age of staff RNs compared to other RNs under 52 and planning to leave the profession within 5 years suggests that *nurses working as in-patient hospital staff RNs not only have a higher rate of early "burn-out" from the profession than nurses working in other titles, but also tend to "burn out" at even earlier ages than do other nurses.*

Table 12

Analysis of RNs < 52 Years of Age and RNs > or = 52 Years of Age,

Average Age of RNs Planning to Leave Job < 5 Years & Average Age of RNs Planning to Leave RN Profession < 5 Years:
In-Patient Hospital Staff RNs, RN Managers & All Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS

	Age < 52 Years											*Age > or = 52 Years*										
	All Age < 52		Leaving Job < 5 Years				Leaving Nursing < 5 Years				All Age > 51		Leaving Job < 5 Years				Leaving Nursing < 5 Years			
Job Category	N	Col. %	N	Col %	Ave Age	Std Dev	N	Col %	Ave Age	Std Dev	N	Col. %	N	Col. %	Ave Age	Std Dev	N	Col %	Ave Age	Std Dev
In-patient Hospital **Staff RNs**	2,809	42.3	1,015	46.7	37.5	8.0	383	44.4	39.4	7.6	804	25.8	118	20.5	56.4	3.8	337	26.8	59.1	4.2
In-patient Hospital RN **Managers**	234	3.5	54	2.5	43.0	6.2	24	2.7	43.3	6.1	105	3.4	22	3.8	56.7	4.8	48	3.8	58.1	4.5
All Other In-Patient Hospital RNs	367	5.5	112	5.1	43.0	5.2	41	4.8	45.2	5.4	223	7.2	51	8.8	56.5	3.7	69	60.6	60.6	4.6
All Other RNs working in NYS	3,229	48.6	992	45.7	41.6	6.8	416	48.1	42.8	6.6	1,979	63.6	387	67.0	56.8	4.8	801	59.8	59.8	5.0
All RNs working in NYS	6,639	100	2,173	100	39.8	7.6	863	100	41.4	7.3	3,111	100	578	100	56.7	4.5	1,255	59.6	59.6	4.8
			Eta = .283 Sig.= .000				Eta = .253 Sig. = .000						Eta = .040 Sig. = .820				Eta = .105 Sig. = .003			
			68.1% of NYS RNs are < 52 years of age.										31.9% of NYS RNs are > or = 52 years of age.							

Correlations of Timing-to-Exit (Both Current Job and the RN Profession) with Job Satisfaction, Organizational Commitment and Job-Search Behavior

The bar chart in Figure 31 depicts the magnitudes of the correlations between job satisfaction, organizational commitment and related outcomes such as job search behavior and timing-to-exit plans. In this instance, these correlations are generated for RNs under age 52 within each of the four comparison groups of nurses. These comparison groups include in-patient hospital staff nurses, nurse managers, all other in-patient hospital RNs and all other RNs working in NYS.

It is noteworthy that the size of the correlations with outcome behavior are consistently greater for the timing-to-exit-current-job scale than for the timing-to-exit-the nursing-profession scale. This finding was expected because nurses who are unhappy in their jobs may have little choice but to stay in the profession for financial reasons, but may have more flexibility when it comes to changing job settings. The magnitudes of the correlations of in-patient hospital staff nurses' job satisfaction and organizational commitment scale scores with their timing-to-exit-current-job scale scores are notably lower than the magnitudes of those same two correlations for the other three groups of RNs – managers, other in-patient hospital RNs, and all other RNs working in NYS. The detailed analysis presented in Chapter 7 of Volume II, *RNs' Ratings of Factors Impacting Their Job Satisfaction*, suggests a likely explanation for this finding.

Survey respondents who ranked compensation above other job dimensions as their #1 job priority (see the earlier discussion of Figure 28) tended to be less satisfied with their jobs, but also less likely to be planning on leaving their jobs. The "job satisfaction" survey scale measures the degree to which respondents find their jobs intrinsically "satisfying," *not* the degree to which respondents are satisfied that no other job is likely to provide them with substantially better compensation. (Even the satisfaction-with-pay scale does not necessarily reflect respondents' opinions as to whether or not they could find a job that would pay them better, but only respondents' opinions as to whether or not they are adequately paid for the work they do.)

As demonstrated by the percentages shown in Figure 28, in-patient hospital staff RNs select compensation as their #1 job priority with greater frequency than nurses in any of the other three RN groups. Given their average level of education and experience, in-patient hospital staff RNs make a better hourly wage in their jobs than they would be likely to earn in another setting. Consequently many staff nurses, faced with financial responsibilities that make it difficult to accept a cut in pay, are less satisfied with their jobs than average but also less likely to leave their positions than equally dissatisfied nurses holding other positions whose alternatives may be more attractive, i.e., would not include a cut in pay. This dynamic most likely accounts for the weaker correlations noted above between job satisfaction, organizational commitment, and timing-to-exit-the-current-job among in-patient hospital staff nurses compared to other nurses. In other words, the higher priority accorded by in-patient hospital staff nurses to compensation as a job satisfier over other job dimensions, dimensions more related to "intrinsic" job satisfaction, results in a "dampening" of the predictive validity of the Price-Mueller model. A lower level of job satisfaction does not predict "leaving behavior" for in-patient hospital staff nurses as well as it does for the other three groups of nurses.

Figure 31

Magnitudes of Correlations[a] of Job Satisfaction, Organizational Commitment & Job Search Behavior with "Timing to Exit"[b] Nursing Profession and "Timing to Exit"[b] Current Job, Only[c]: In-Patient Hospital Staff RNs, Nurse Managers & Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS Under the Age of 52

Correlations of Job Satisfaction and Organizational Commitment with Timing to *Exit Nursing Profession*

Correlations of Job Satisfaction and Organizational Commitment with Timing to *Exit Current Job, Only* [c]
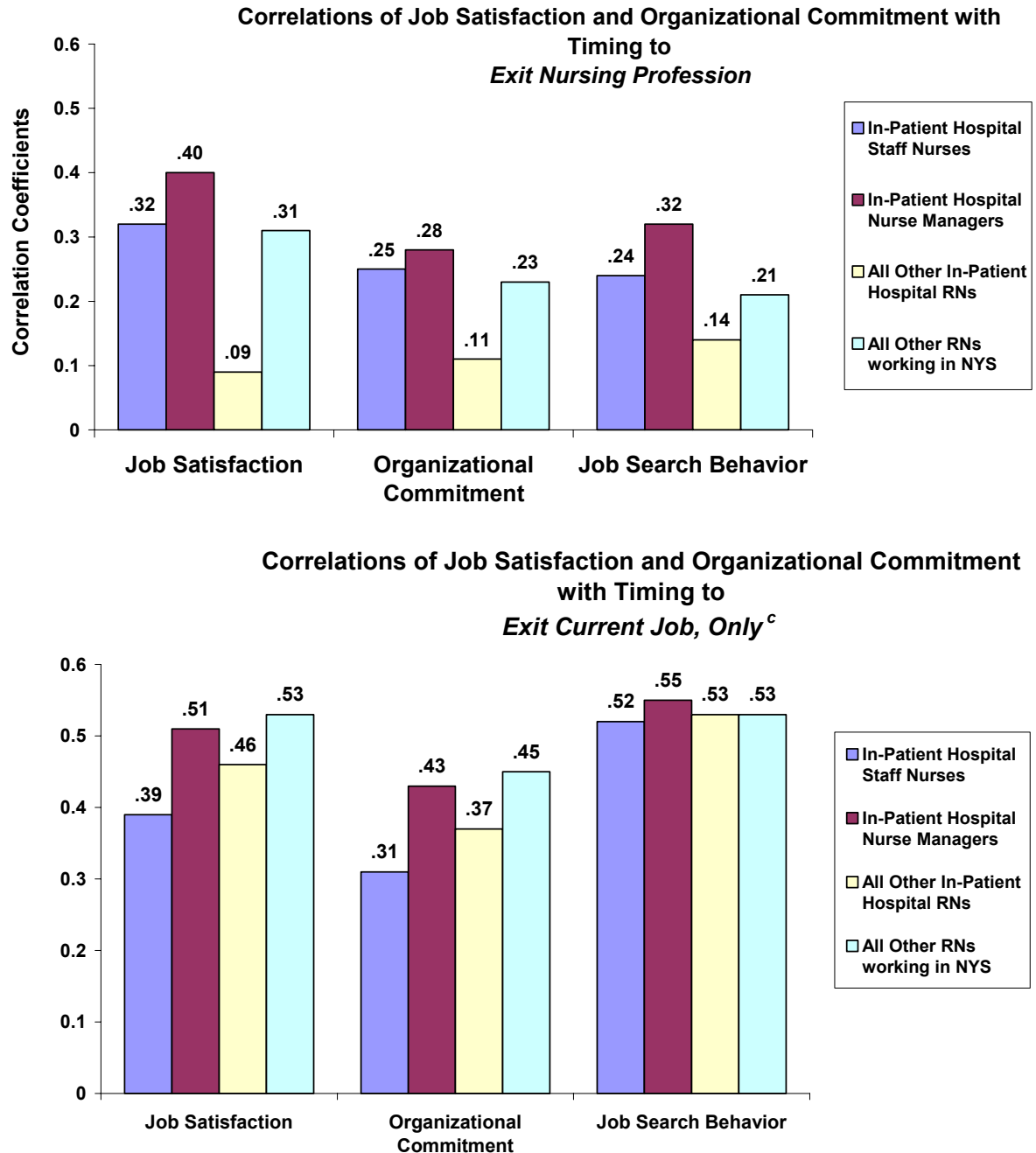
[a]All correlation coefficients for Job Satisfaction and Organizational Commitment are positve in value, and for Search Behavior are negative in value. All correlation coefficients are significant above the .05 level except the .09 correlation between "Job Satisfaction" and "Timing to Exit the RN Profession" for "Other In-Patient Hospital RNs."

[b]"Timing to Exit" scale scores range from "2" = "In the next 12 months " to "5" = "Not for 5 years or more".

The magnitudes of in-patient hospital staff RNs' job-search behavior correlations with the two timing-to-exit scales are generally just as high as those for the other three groups (in contrast with the lower magnitudes of the job satisfaction and organizational commitment correlations with the two timing-to-exit scales for staff RNs compared to the three comparison groups). That is, staff nurses who report a high level of job-search behavior report the same increased likelihood of soon leaving their current jobs or the nursing profession as do RNs within the other three comparison groups who report a high level of job-search behavior.

Figure 32

Average Hourly Wages of In-Patient Hospital Staff RNs Reporting Three Different Levels of Job Search Behavior: High, Moderate & Low, by Regional Typology:

NYC - 5 Borough Area, Downstate Suburbs, Upstate Metropolitan Statistical Areas & Rural Areas of NYS Compared

New York City - 5 Boroughs

	Low	Moderate	High
Dollars/Hour	31.84	31.06	28.6
	N = 616	N = 511	N = 362
	41.4%	34.3%	24.3%

Level of Job Search Behavior

Downstate Suburbs

	Low	Moderate	High
Dollars/Hour	30.44	28.67	26.84
	N = 379	N = 296	N = 234
	41.7%	32.6%	25.7%

Level of Job Search Behavior

Upstate Metropolitan Statistical Areas

	Low	Moderate	High
Dollars/Hour	22.58	20.86	20.31
	N = 512	N = 292	N = 243
	48.9%	27.9%	23.2%

Level of Job Search Behavior

Rural Areas of NYS

	Low	Moderate	High
Dollars/Hour	20.83	19.18	18.08
	N = 90	N = 58	N = 48
	46.0%	29.6%	24.5%

Level of Job Search Behavior

If the "prioritizing of compensation" does in fact dampen the relationship between job satisfaction and exit intentions for in-patient hospital staff nurses, that same tendency to accord highest priority to compensation would predict higher levels of job search behavior among staff RNs who earn a lower hourly wage. The four bar charts in Figure 32, one for each of four regions of NYS, demonstrate just such a relationship between level of job-search behavior and average hourly wage. In-patient hospital staff RNs reporting low levels of search behavior are earning on the average (for their region of the State) between 11 percent and 15 percent more per hour in hourly wages than are staff RNs reporting high levels of search behavior. ("Job Search Behavior Scale" scores ranging from "1.0" to "2.5" = "Low Search Behavior," scores ranging from "2.6" to "3.5" = "Moderate Search Behavior," and scores from "3.6" to "5.0" = "High Search Behavior"). Clearly, "level of compensation" strongly impacts upon staff nurses' decisions to look for other employment.

Table 13
Correlations of Job Satisfaction, Organizational Commitment & Job Search Behavior Scale Scores with "Timing to Exit" Current Job & RN Profession Scale Scores:
In-Patient Hospital Staff RNs, RN Managers, All Other In-patient Hospital RNs & All Other RNs Working in NYS Compared;
Analysis limited to RNs > or = Age 52 Years

	Correlation Coefficients [a]		
Correlations with Timing to Exit RN Profession	Job Satisfaction	Organizational Commitment	Job Search Behavior
In-patient Hospital Staff RNs	***0.15***	***0.14***	***-0.06***
In-patient Hospital RN Managers	0.16	0.02	-0.04
All Other In-Patient Hospital RNs	0.11	***0.26***	0.09
All Other RNs Working in NYS	***0.13***	***0.11***	***0.09***
Correlations with Timing to Exit Current Job, only [b]	Job Satisfaction	Organizational Commitment	Job Search Behavior
In-patient Hospital Staff RNs	***0.34***	***0.31***	***-0.42***
In-patient Hospital RN Managers	***0.41***	0.15	***-0.59***
All Other In-Patient Hospital RNs	***0.46***	***0.39***	***-0.58***
All Other RNs Working in NYS	***0.50***	***0.43***	***-0.49***

[a]Bolded, italicized and underlined correlation coefficients are significant above the .05 level.
[b]"Leaving Job, only, < 5 Years" refers to respondents who indicated that they are leaving their current job within 5 years, and if they are also leaving RN profession, timing does not coincide.

Table 13 displays the results of the same correlation analysis shown in Figure 31, but limited to RNs over the age of 51. Because older nurses are most often planning to leave the profession for retirement reasons, the timing-to-exit-nursing-profession scale scores correlate much more weakly with job satisfaction, organizational commitment and job search behavior for these older nurses. Variability in timing-to-exit intentions is more highly restricted in this age group, which also accounts for the dampening of the association. The only interesting exception is the higher correlation between commitment and profession exit-intentions for the older group of "other in-patient hospital nurses" (.26) than for the younger group of such nurses (.11).

The unexpected "reversal" in relative correlation magnitudes for the older and younger nurses within the group of "other" in-patient hospital RNs may be explained by the data in Table 11 above. This generally highly educated, relatively well paid, most satisfied and least stressed group of RNs (among the three groups of older in-patient hospital RNs) has a much lower percentage of its members planning to exit the profession within the next five years than do the other three groups of RNs. And this lower rate of "leaving" the profession is true for this group in spite of the fact that the average age of this over-52 group is somewhat older than the average ages of the two other over-52 groups of in-patient hospital nurses (and only slightly younger than the average age of the comparison over-52 group of "all other RN working in NYS").

For "other in-patient hospital RNs", the higher correlation between satisfaction and leaving intentions observed in the older group (compared to the younger group), reflects the fact that the members of this older group, (more satisfied with their jobs than their same-aged colleagues in the other three groups) are planning to remain in nursing substantially beyond the average retirement age reported by survey respondents.

Correlations of Job Climate Scale Scores with Timing-to-Exit Scale Scores (Both for Current Job and the RN Profession)

The bar chart in Figure 33 displays the magnitudes of the correlations between RNs' job climate scale scores (ranging from "1" = "low" to "5" = "high") and their timing-to-exit-current-job scale scores (which range from "2," "in the next 12 months to "5," "not for five years or more"). The climate scales are arrayed in order of the correlation magnitudes for in-patient hospital staff RNs. Once again, the rank order of the climate scale scores by the strength of their correlations (in this case, with the timing-to-exit-current-job scale scores) is different for each of the four major RN comparison groups. These simple bivariate correlational findings indicate clearly that the job climate factors most important to one group of nurses' "exit" decisions are different from the job climate factors most important to the "exit" decisions for another group of nurses.[17]

A particularly critical finding here is that workload-stress and frequency-of-great-stress scale scores correlate more highly with in-patient hospital staff nurses' timing-to-exit intentions for their current job than do any of the other job-climate scores. Also, the magnitudes of these two correlations are far higher for in-patient hospital staff nurses and nurse managers than for the other two comparison groups of RNs. These findings underscore a theme reiterated throughout this Supplement – namely, frequent and severe job stress appears to be an over-riding issue in the work life of in-patient hospital staff nurses, often impelling them to seek other nursing employment, or even to leave the nursing profession altogether well before retirement age.

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[17] The statistical implication here is that the effects of organizational climate factors upon "leaving" intentions may not be invariant regardless of a nurse's job type, but may intensify or weaken depending upon the type of position held.

Figure 33

Magnitudes[a] of Correlations of Job Climate Scale Scores with *"Timing to Exit Current Job, only"* [b] : Staff RNs, Nurse Managers & All Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS, < Age 52 (Cases excluded from the analysis if plans to leave current job within 5 years = plans to leave the RN profession)
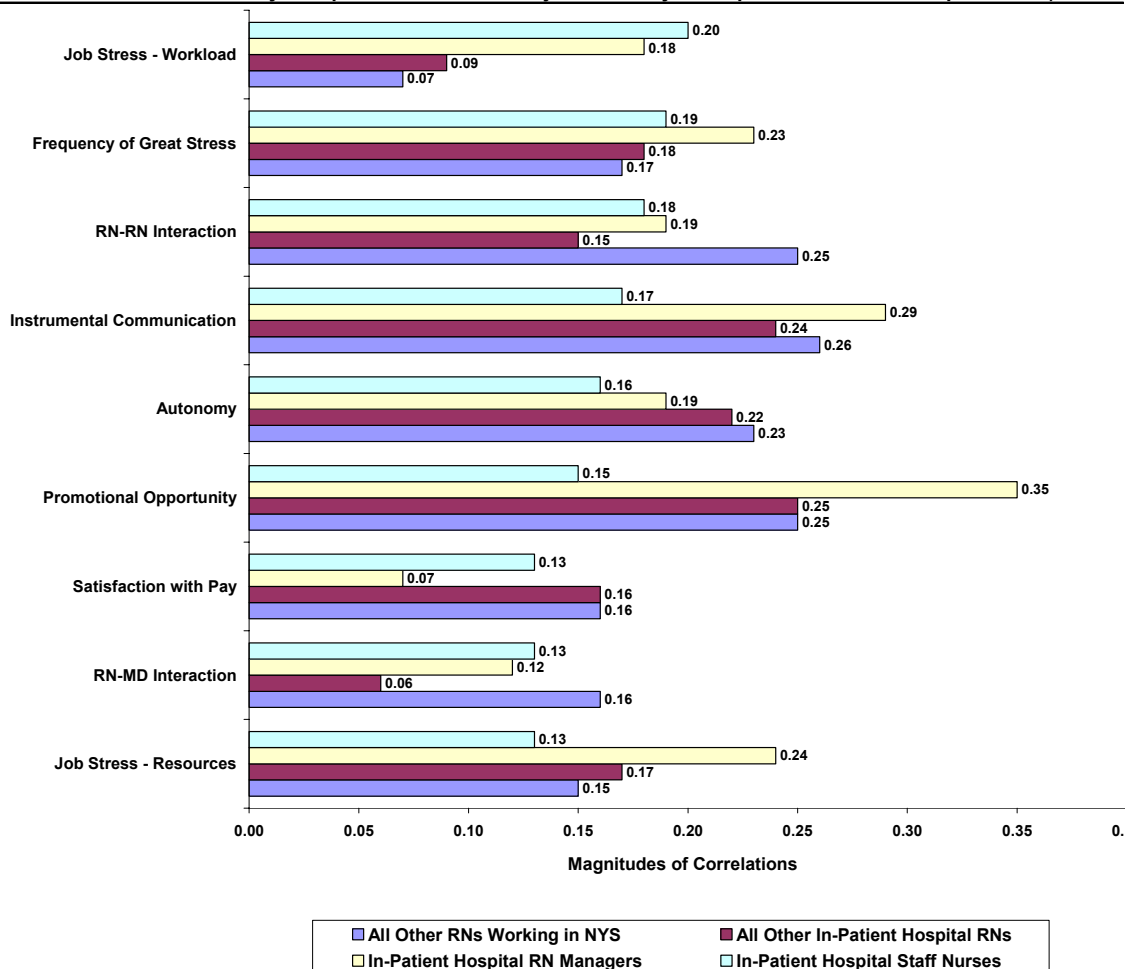
*Only correlation magnitudes are shown, not whether the correlations are negative or positive. As expected, correlations of Job Satisfaction with the three stress scales (Frequency, Workload, and Resources) are negative. All other correlations are positive.
All correlations coefficients for in-patient hospital staff RNs and for the "Other RNs working in NYS" group are statistically significant above the .000 level.

RNs Leaving Soon and RNs Who Have Left: Who They Are and The Reasons they Give For Leaving

In this section we narrow our focus to those 596 RN respondents in our survey sample who left the profession within the last three years. Consistent with prior analyses, we compare and contrast the same four groups of RNs – three from in-patient hospital based settings and a reference group of all other (non-hospital based) RNs. The average age, years of nursing experience, hours worked per week, job satisfaction, organizational commitment, and frequency-of-great-stress scale scores are displayed in Table 14.

The data displayed in Table 14 paints a dramatic picture of the striking differences between in-patient hospital staff nurses and their colleagues in the other

three comparison groups who have recently left the profession. At the time of their departure, in-patient hospital staff nurses were, on average, much younger than their comparison group colleagues. Staff nurses for example averaged 51.4 years of age at the time they left compared to 58.4 years for nurse managers, 53.6 years for "other in-patient hospital staff RNs", and 55.7 years for all other RNs. Equally striking, these in-patient hospital staff nurses also have had considerably shorter careers in nursing compared to RNs in the other groups who have left the profession (21.7 years compared to 31.2 years, 25.7 years and 26.7 years).

Table 14
All RNs Who Reported Having Left Nursing Within the Last Three Years:
In-Patient Hospital Staff RNs, Nurse Managers & All Other In-Patient Hospital RNs
Compared to All Other RN Respondents[d] Reporting Having Left the RN Profession

	RNs Who Left Nursing Within Last Three Years			
	In-Patient Hospital Staff RNs	In-Patient Hospital RN Managers	All Other In-Patient Hospital RNs	All Other RNs Registered in NYS
Number of RN Respondents	*120*	*29*	*44*	*403*
Row Percentages	*20.2*	*4.8*	*7.4*	*67.6*
Average Age	51.4	58.4	53.6	55.7
Average Years of Experience as RN	21.7	31.2	25.7	26.7
Average Global Job Satisfaction Score[a]	3.04	3.36	3.53	3.44
Average Organizational Commitment Score[a]	2.75	3.02	3.25	3.19
Average Frequency of Stress Score[b]	4.34	4.38	3.78	3.65
Average Hours worked per Week[c]	36.6	45.9	41.9	33.4

[a]High Satisfaction or Commitment = 5, Low = 1
[b]High frequency of experiencing great stress = 5 "Almost every day", Low = 1 "Never"
[c]Includes over-time and second job hours as well as regularly scheduled work week hours
[d]Survey respondents not currently working in nursing were not requested to provide "place of practice" information, so these analyses were not limited to RNs who had worked in NYS, only to RNs currently registered in NYS

The group of in-patient hospital staff nurses who have left the profession within the past three years were also far less satisfied with their jobs, on average, than nurses who reported currently working within that title in NYS. (The average satisfaction scale score for "left" staff nurses was 3.0 compared to 3.3 for staff nurses "currently" working). Their 3.0 average satisfaction score was also much lower than the average satisfaction scores for any of the other three groups of "recently left" RNs (3.4 for nurse managers, 3.5 for "all other in-patient hospital RNs" and 3.4 for all other RNs registered in NYS). "Recently left" staff nurse organizational commitment scores were also significantly lower than the scores of nurses in the other three "recently left" groups (average score of 2.8 compared to 3.0, 3.3 and 3.2) and their average frequency-of-great-stress score was almost as high as the average score of "recently left" nurse managers (4.3 compared to 4.4) and higher than the average scores of "other in-patient hospital RNs" (3.8) and "all other NYS registered RNs" (3.7) who recently left the profession.

In summary, the data in Table 14 demonstrate that in-patient hospital staff nurses are leaving the RN profession at considerably younger ages (on average), after much

shorter careers, with much more negative memories of their working experience than are other RNs working in NYS. Only the small group of nurse managers who have left the profession report (retrospectively) that they experienced great stress on the job with the same debilitating frequency.

The Age Profiles of Departing RNs

The bar charts in Figure 34 illustrate graphically the age-distribution differences between in-patient hospital staff RNs and all other RNs who left the nursing profession within the past three years. These percentages indicate that staff nurses leave the profession with 60 percent greater frequency before the age of 46 than do other RNs and, correspondingly, other RNs leave the nursing profession with 33 percent greater frequency after the age of 56 than do in-patient hospital staff RNs. Clearly, the increased stress and job dissatisfaction of staff RNs translates into severely truncated careers for many of them, not to mention the associated loss of many productive years of experienced nursing service at precisely a point in time when the health-care system is facing a serious challenge in providing such services.

Figure 34
Age Distributions of RNs Who Left the Nursing Profession Within the Past 3 Years:
Comparing In-Patient Hospital Staff RNs (N = 122) to All Other RN Respondents (N = 467)
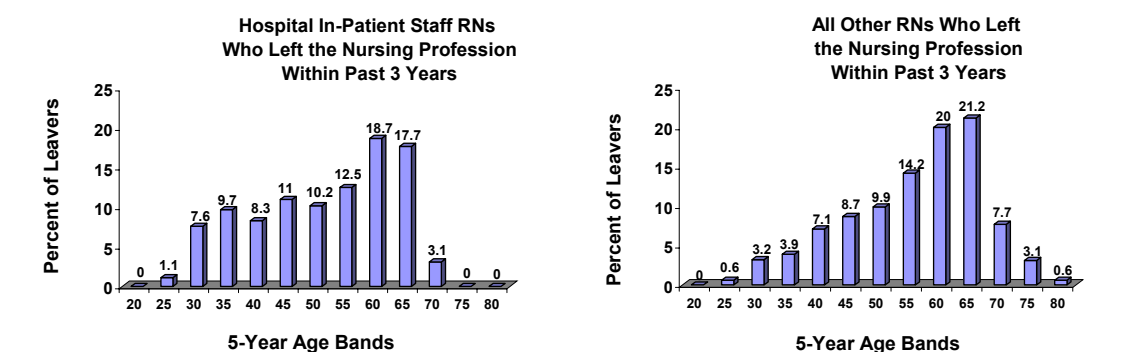
Reasons for Departure Given By Leavers

In Figure 35 we highlight the percentages of respondents within each of the four comparison groups who selected one specific reason as their #1 reason for leaving the profession. The reasons given are ordered by the frequency of their selection by in-patient hospital staff RNs. The top bar of each group of four represents percentages of in-patient hospital staff nurses, the second bar, nurse managers, the third, all other in-patient hospital RNs, and the fourth, all other RNs (working in other settings). This analysis could not be limited to RNs currently working in NYS (as were the other analyses), because nurses no longer working in the nursing profession were not asked for their location of practice.

For all four of the comparison groups, "stress" and "retirement" are cited much more frequently than any of the other 10 reasons as a respondent's #1-ranked reason for leaving the nursing profession. A greater percentage of in-patient hospital staff RNs (29 percent), however, ranked "stress" as their most important reason for leaving the

profession – a percentage far higher than for any of the other three groups (25.3 percent of nurse managers, 17.3 percent of "other in-patient hospital RNs" and 18.2 percent of all other RNs registered in NYS). Also, only among the in-patient hospital staff RNs did a higher percentage select "stress" as their #1-ranked reason for leaving (29.0 percent) than selected "retirement" (26.1 percent).

Nurse managers selected "retirement" more often than stress, but the percentages were close (32.3 percent selected retirement and 25.3 selected stress). The fact that one quarter of nurse managers leave nursing because of "stress" corresponds with the very high average frequency-of-great-stress scale score for this group of leavers shown in Table 14 (average frequency-of-great-stress score of 4.38, compared to average stress scores of 4.34 for staff nurses, 3.78 for "other in-patient hospital RNs" and 3.65 for "all other RNs").

Once again, the percentages shown for the two "other" comparison groups, "other in-patient hospital RNs" and "all other RNs working in NYS," are much more similar to each other than to the percentage data for nurse managers and for staff nurses. Both these groups select "retirement" as their #1 reason for having left the nursing profession (44.5 percent of "other in-patient hospital RNs" and 39.5 percent of "all other RNs") more than twice as frequently as they selected "stress" (17.3 percent and 18.2 percent respectively).
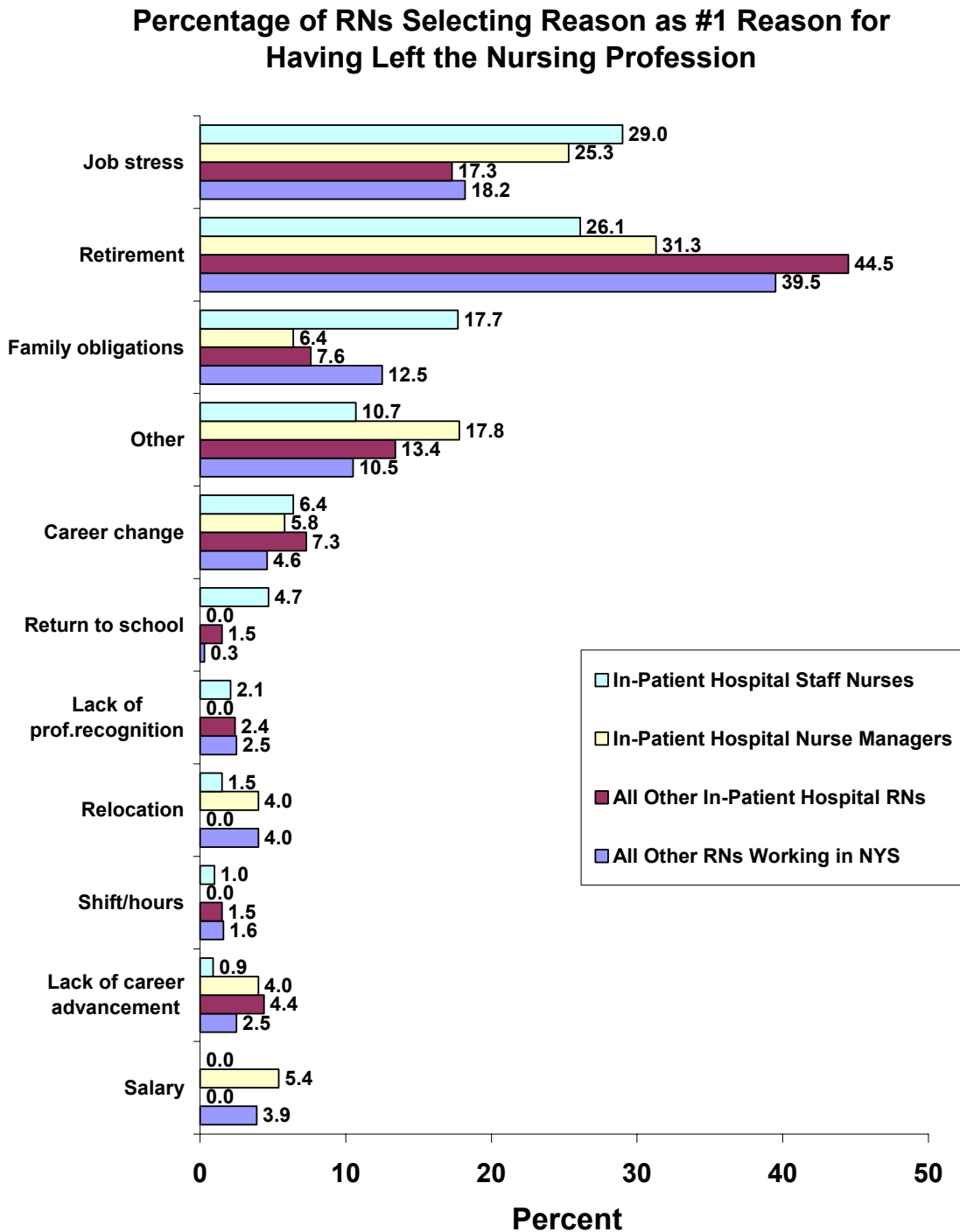
The finding that in-patient hospital staff nurses identify stress as their major reason for having left the profession more often than any other reason, and cite stress as their major reason with far greater frequency than do any of the other three groups of nurses who have recently left nursing, certainly corresponds with the very high percentage of in-patient hospital staff RNs who report having left the profession well before retirement age. It also corresponds with the much lower than average job satisfaction and organizational commitment scale scores of "recently left" in-patient staff nurses compared to the other three groups of recently left nurses, as well as staff nurses' much higher than average stress-frequency score compared to all recently departed RNs except nurse managers.

The third most frequently selected reason by in-patient hospital staff RNs as their "#1-ranked reason" for having left the nursing profession was "family obligations." This reason was selected as first in importance far more frequently by staff RNs (17.7 percent) than by any of the other three comparison groups (6.4 percent of nurse managers, 7.6 percent of "other in-patient hospital RNs" and 12.5 percent of "all other RNs registered in NYS"). This finding is consistent with inter-group differences related to family status discussed earlier. In-patient hospital staff RNs have children living at home with them substantially more often than other NYS nurses and are almost twice as likely to have children at home under six years of age than are other nurses (see Figure 7). It is not surprising, then, that "family obligations" is cited so often by in-patient hospital staff nurses as the main reason why they left the profession.

Figure 35
Percentage of RNs Selecting Each of Eleven Reasons for Leaving Nursing as Their
#1 Reason for Having Left the Nursing Profession:
In-Patient Hospital Staff RNs, Nurse Managers & All Other In-Patient Hospital RNs Compared to
All Other RNs Working in NYS Who Left Within the Past Three Years

Percentage of RNs Selecting Reason as #1 Reason for Having Left the Nursing Profession

A clear implication of the finding that "family obligations" is among the top three reasons cited by in-patient hospital staff RNs for leaving the nursing profession is that accommodating these family obligations of hospital staff nurses might substantially improve retention among staff nurses during the childbearing and child-rearing years. For example, more flexible scheduling options, including the elimination of mandatory overtime, might help induce nurses with child care responsibilities to remain in the profession.[18]

Those Who Plan to Leave Imminently – But Who Haven't Left Yet

Figure 36 presents data parallel to that highlighted in Figure 35, but restricted in this case to a subset of RNs working in NYS who reported that they plan on leaving the nursing profession within the next 12 months. The bar chart in Figure 36 displays the percentages of RNs selecting each of the eleven possible choices as their top-ranked reason for leaving, but only for two of the four comparison groups – in-patient hospital staff RNs and all RNs not working within the in-patient hospital setting. Data for nurse managers and the "other" group of in-patient hospital RNs were not included in the bar chart because the small sizes of these specialized populations of "leavers."

The patterns exhibited mirror closely the patterns described for the Figure 35 bar chart. Once again in-patient hospital staff nurses identify stress as their #1-ranked reason for leaving the nursing profession with far greater frequency (35.4 percent) than RNs working outside of the in-patient hospital setting (21.1 percent). Once again stress was the most frequently cited reason for leaving the profession by in-patient staff RNs, while retirement was the most frequently cited reason (44.4 percent) by the large comparison group of RNs working outside of in-patient hospitals (compared to only 21.7 percent of in-patient staff RNs selecting retirement as their #1 reason).

In comparing Figure 36 with Figure 35, the most noteworthy anomaly is that the two groups of RNs intending to leave nursing within the next 12 months did not mention "family obligations" as their top-ranked reason for leaving as did the two comparable groups of RNs who left nursing within the past three years. These staff RNs intending to leave nursing within 12 months selected "family obligations" with a frequency of only 5.9 percent, a sixth place ranking for frequency of selection. In contrast, the "already left" staff RNs selected "family obligations" with a much higher frequency of 17.7 percent, ranking it a strong third among #1-ranked reasons for leaving the profession.

For in-patient hospital staff RNs leaving within 12 months, as well as for the group of "other" RN leavers not working in in-patient hospitals, the strong third top-ranked reason for leaving is salary, selected by 12.3 percent of staff RNs and 11.9 percent of the RN group working in other settings. Among the "already left" group of in-patient hospital staff RNs, *not one respondent* selected salary as their #1 reason for leaving the profession. This puzzling reversal in the percentages selecting family obligations and salary as their #1 reason for leaving the nursing profession, between

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[18] Accommodating the needs of RNs during these years is especially important in light of the fact that data regarding "nursing re-entry" training programs (which some metropolitan area hospitals have attempted to sponsor) is not encouraging about the feasibility of bringing large numbers of RNs, who left the profession for a number of years to rear children, successfully back into the profession.

leaving-in-12-months and already-left RNs, particularly staff RNs, is open to a number of possible interpretations.

Figure 36
Percentage of RNs Selecting Each of Eleven Reasons for Leaving Nursing as Their
#1 Reason for Planning to Leave the Nursing Profession:
NYS In-Patient Hospital Staff RNs Planning to Leave Within 12 Months Compared to
All NYS RNs Not in In-Patient Hospitals & Planning to Leave Within 12 Months[a]

Percentage of RNs Selecting Reason as #1 Reason for Leaving the Nursing Profession Within 1 Year
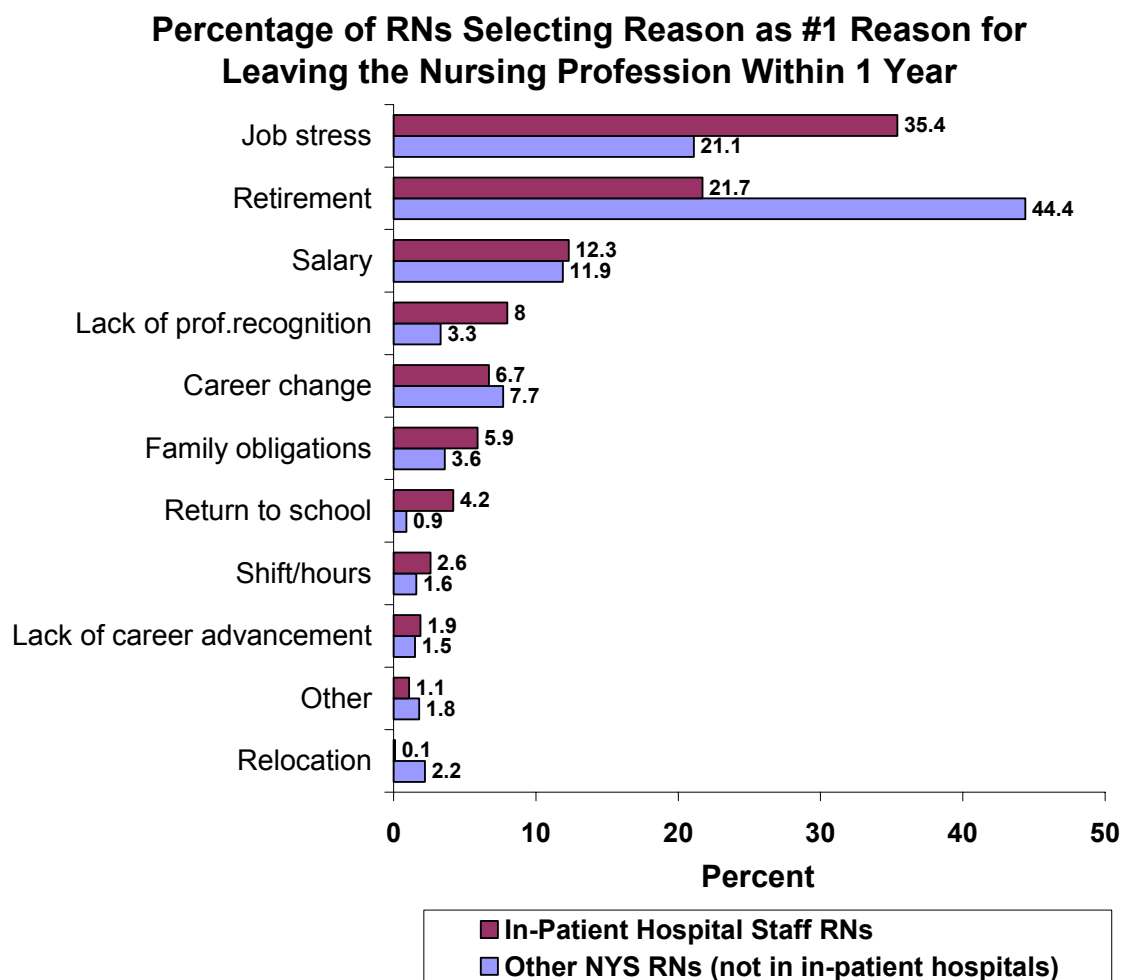
[a]In-Patient Hospital Nurse Managers (N=7) and "All Other In-Patient Hospital RNs" who are planning to leave nursing within the next year do not have the distributions of their responses shown in the bar chart because the numbers of these groups are too small. The following is summary information for these two groups, showing the percentages who selected each of that groups top three #1 reasons for leaving the nursing profession:

"In-Patient Hospital Nurse Managers": 23.2% "Stress"; 21.0% "Retirement"; 51.2% "Salary"

"All Other In-Patient Hospital RNs": 59.2% "Retirement; 16.8% "Stress"; 9.2% "Family Obligations".

The most likely explanation derives from analyses discussed in Volume II, Chapter 6: *The Reasons They Give For Leaving.* Those analyses demonstrate that RNs citing "family obligations" as their top-ranked reason for leaving the profession also have the highest average job satisfaction scores among leavers. RNs who left the

profession (perhaps just temporarily) and were relatively satisfied with their careers were more likely to renew their three-year registrations after they expired, than RNs who left the profession and were relatively dissatisfied with their careers. The already-left group of respondents (limited to RNs who reported having left the profession within the past three years) probably includes a disproportionate number of RNs who left for family reasons and were, in fact, relatively satisfied with their careers compared to the group of RNs planning to leave nursing within the next 12 months.

Another possible explanation for RNs who report intending to leave nursing within 12 months citing salary as their #1-ranked reason with greater frequency than the already-left group is a possible tendency of RNs evaluating their decision to leave nursing retrospectively to discount the importance of salary in their decision. (See Chapter 7, Volume II discussion of the finding that retired RNs weighted compensation as relatively much less important to their job satisfaction than did currently working RNs.)

"STRESS" LEAVERS VS. "RETIREMENT" LEAVERS, THE DIFFERENCES BETWEEN THEM

As we have seen, in-patient hospital staff RNs cite "stress" as their most important reason for leaving the profession more often than any other reason, and with far greater frequency than do other groups of nurses. For other nurses, the most often cited #1 reason for leaving the profession is "retirement." The age distributions shown in Figure 34 further demonstrate that in-patient hospital staff nurses are leaving the nursing profession much more often at relatively young ages compared to other NYS RNs.

The evidence is quite consistent with the notion that high levels of occupational stress, involving consistent if not daily exposure, may have very costly "downstream" consequences. Unacceptable levels of job stress may be driving large numbers of nurses out of the profession prematurely and well before retirement age. One test of this hypothesis would involve an examination of the age differences between those selecting "stress" as their major reason for quitting the profession, and those selecting "retirement."

Table 15 shows the average ages for RNs in each of our four comparison groups that fall into each of these "reason for leaving" categories. The average ages of these different types of "leavers" are shown – both for RNs planning to leave the profession within the next 12 months and for RNs who left the profession within the past three years.

You will note that in all four comparison groups – in-patient hospital staff RNs, nurse managers, other in-patient hospital nurses and all other RNs (not working in in-patient hospitals) – the average ages of the "stress" leavers are far younger than the average ages of the "retirement" leavers regardless of the time frame involved. For example, the average age of in-patient hospital staff RNs who left within the past three years because of stress was 51.7 years of age; the average age of staff RNs who left within the past three years because of retirement was 63.4 years of age, a remarkable

11.7 year age differential. In other words, if the in-patient staff RNs who left the profession primarily because of stress had remained in nursing and retired at the same age as the "retirement" leavers, the average length of their careers would have been extended from 20.4 years to 32.1 years. *The extremely important implication of this data is that the career longevity of in-patient hospital staff nurses leaving the profession because of exorbitant stress is shortened by more than one third (36.4 percent).*

Table 15

Average Ages, Years of RN Experience, and Frequency-of-Great-Stress Scores for RNs Citing Retirement or Stress as Their #1 Reason for Leaving the Profession, Comparing RNs"Leaving within One Year" & "Left Within Past 3 Years":

In-Patient Hospital Staff RNs, Nurse Managers & All Other In-Patient Hospital RNs Compared to All Other RNs Working in NYS (All Respondents Were Included for "Already Left" Analyses[b])

Job Title Category and Status of Leaving Nursing Profession: Leaving Soon or Left	"Stress" #1 Reason for Leaving						"Retirement" #1 Reason for Leaving						
	Sample N	Col. %	Ave. Age	Ave. Years Exp. as RN	Std Dev.	Ave. Freq. Stress Score	Sample N	Col. %	Ave. Age	Ave. Years Exp. as RN	Std Dev.	Ave. Freq. Stress Score	% Citing "Stress" as #2 Reason
Leaving Within 1 Year													
In-Patient Hospital Staff RNs	46	46.7	42.7	17.2	11.2	4.7	28	19.9	61.5	29.9	3.1	4.2	63.5
Nurse Managers[a]	1[a]	1.5	***	***	***	***	1[a]	0.9	***	***	***	***	***
All Other In-Patient Hospital RNs	3	3.4	***	***	***	***	12	8.3	64.0	37.6	4.1	4.0	54.6
All Other RNs working in NYS	48	48.4	50.8	20.4	7.9	4.6	100	70.9	62.4	33.9	5.0	3.3	38.5
Left Within Past 3 Years													
In-Patient Hospital Staff RNs	34	28.5	51.7	20.4	10.6	4.9	30	14.4	63.4	33.0	3.1	4.0	40.4
Nurse Managers	6	5.4	58.3	29.4	7.5	5.0	8	3.7	63.5	37.8	5.9	4.4	82.4
All Other In-Patient Hospital RNs	7	6.0	53.5	23.2	7.0	4.5	18	8.6	61.4	34.8	6.1	3.6	43.5
All Other RNs[b]	71	60.2	54.1	24.5	10.6	4.5	154	73.2	63.9	34.3	5.1	3.3	34.9

[a]Insufficient number of respondents to include averages in chart

[b]Survey respondents who were no longer currently working in nursing were not asked to give location of RN practice, so data from all respondents who indicated they had left nursing within the past three years were included in these analyses (i.e., analyses could not be limited to RNs who had practiced in NYS).

When this same type of analysis is applied to the small numbers of RNs planning on leaving nursing within the next 12 months, the picture that emerges is even more unsettling. Staff nurses planning on leaving the profession in the next 12 months due to stress are 18.8 years younger, on average, than staff nurses planning on leaving due to retirement (i.e., 42.7 versus 61.5 years of age). The average difference in the lengths of the in-patient hospital staff nurse careers of RNs leaving due to stress compared to RN's leaving due to retirement is 12.7 years. If these staff nurses who reported plans to leave the profession within the year because of overwhelming stress instead worked another 12.7 years, the lengths of their careers would be extended from 17.2 years to 29.9 years. *In effect, based on this analysis of in-patient hospital staff RNs who plan to leave the profession within 12 months and cite stress as their major reason, 42.5 percent of their potentially most productive years of service as RNs will be lost to the profession because of "premature" exit plans which they attribute to unacceptable levels of stress.*

Manpower Loss Implications

As we observed earlier (in reference to Figures 35 and 36) approximately 29 to 35 percent of in-patient hospital staff nurses will leave the profession early due to stress, truncating their potential years of service by close to 40 percent. Conservatively, these numbers translate to an estimated 12 percent loss in the RN in-patient hospital staff workforce as a consequence of stress-related attrition.

More importantly, these crude estimates of effective staffing losses arguably understate the true cost. A wealth of occupational-stress literature makes clear that "exit" behaviors are by no means the exclusive coping mechanism for dealing with high-stress environments. Others include absenteeism, excessive sick-leave usage, alcohol and substance abuse, and a wide array of other mental health related problems that may well translate to additional lost time to the profession, as well as severe personal tolls for individuals. The "cost" of RNs being forced out of the profession early due to stress is a cost not only to the nursing profession, to the health care field, and to all of us who "consume" their services, but also to the individuals who find themselves having to give up the career for which they spent years of training and money in preparation, a career that to many was a "vocation."

Additional Confirmation of the Stress Hypothesis

Table 15 also provides other evidence that serves to confirm the significance of occupational stress in impacting leave-talking decisions among in-patient staff nurses. You will note, for example, that those who indicated stress was their #1 reason for leaving (regardless of time frame) also had much higher average scale scores on the stress-frequency scale than did their counterparts leaving for the reason of retirement. This finding is consistent with the notion that that exorbitant stress levels have a significant causal effect upon the decision to exit the profession prior to retirement age.

You will also note – as seen in the last column of Table 15 – even among the RNs citing retirement as their #1 reason for leaving the profession, the percentage identifying stress (from among the remaining 10 "reason for leaving" choices) as their #2-ranked reason for leaving the nursing profession was remarkable. All three groups of in-patient hospital "retirees" selected "stress" as their #2 reason with far greater frequency than did RNs not working within in-patient hospital facilities. Correspondingly, all three groups of in-patient hospital retirees – staff, managers and "others" – exhibit higher average frequency-of-great-stress scores than do retirees working outside of in-patient hospitals.

Perhaps the most sobering observation to be made from Table 15 is the precipitous drop in the average age of in-patient hospital staff RNs planning on leaving the profession within the next 12 months because of stress (42.7 years), compared to the average age of in-patient hospital staff nurses who already left the profession within the past three years for the same reason (51.7 years), a nine-year differential.

A proper appreciation of the full import of this finding requires, however, that we eliminate any portion of this 9-year age difference that could be plausibly attributed to measurement error. In order to do so, a number of working assumptions had to be made. For example, we assume here that respondents who said that they planned to

leave within 12 months (the "12-month leavers") would, on average, be leaving in six months from the time of filling out the survey and giving their current age. We similarly assumed that respondents who indicated that they had already left the profession within the last three years would have been, on average, about 1.5 years younger at the time they left the profession than the "current" age recorded on the survey form. As a result of these two assumptions, an approximate two-year age difference between leaving-in-12-months and the already-left RNs was expected.

This prediction proves reasonably accurate when focusing on the group of RNs working outside of in-patient hospitals and comparing the average ages of "stress" leaving-in-12-months RNs (50.8 years) and "stress" already-left RNs (54.1 years) – a 3.3 year age differential emerges. Similar results characterize other comparisons. For example, if we focus on in-patient hospital staff RNs citing retirement as their primary reason for leaving nursing and compare the average ages of leaving-in-12-months RNs (61.5 years) and already-left RNs (63.4 years) – a 1.9 year age differential is found. For the group of "other RNs not working within in-patient hospitals" who cited retirement as their primary reason for leaving, the average age of those planning to leave in 12 months was 62.4 years versus 63.9 years for those who have left in the last three years, a 1.5 year age differential.

The fact that these three comparisons yield average age differences between the leaving-in-12-months group and the already-left group in the predicted 2-3 year range, gives great credence to the validity of the finding of the 9-year age difference discussed above – between the average age of in-patient hospital staff RNs who left the profession within the past three years because of stress, and in-patient hospital staff RNs intending to leave the profession within the next 12 months because of stress. The implication of this finding, that in-patient hospital staff RNs are leaving the profession at increasingly younger ages, should therefore be given serious consideration. It corresponds with the enormous "jump" in the percentage share (28.5 percent) of in-patient hospital staff nurses comprising the already-left because of stress RN group, and the percentage share (46.7 percent) of staff nurses comprising the leaving-in-12-months because of stress group.

The 9-year drop in the average ages of in-patient hospital staff nurses planning to leave nursing primarily because of stress (leaving-in-12-months group compared to the already-left-within-past-three-years group), coupled with the enormous 18.2 percentage point "gain" in the representation of staff nurses between the already-left and leaving-in-12-months groups, strongly suggest a rapidly accelerating rate of "burn-out" among in-patient hospital staff RNs, resulting in them dropping out of the nursing profession and switching careers at ever younger ages.[19]

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[19] The fact that these findings do *not* hold true for the other three comparisons of the leaver and left groups described above makes chillingly clear that these findings cannot be simply ascribed to some "survey response rate" difference between RNs who have already left the profession and those who are planning to do so, or to some "response psychology" difference between those who have already left and those who are planning to do so, such as "leavers" exaggerating their intentions.

CONCLUSION

In conclusion, it is clear that all in-patient hospital RNs stand at the head of the class in terms of both the frequency and the intensity of their stress exposure. Staff RNs are the least satisfied with their jobs, not only compared to other in-patient hospital RNs, but compared to RNs working in every other setting. They rate major dimensions of the organizational climate in which they work as far less satisfactory. As a result of their lesser job satisfaction, their high level of workload stress, and the high frequency with which they report experiencing great stress in their jobs, it is conservatively estimated that at least 12 percent of the in-patient hospital staff RN workforce has been, and will continue to be, lost to "stress-related burn-out." More sobering still, the rate of this early burnout among the high-risk in-patient hospital RN workforce appears to be accelerating. Clearly, a major area of reform that must be addressed involves stress reduction in hospital settings. Any efforts to otherwise improve the "culture of retention" within hospital settings are unlikely to be productive if the pivotal issue of "stress burn-out" is not addressed. Failure to do so not only places nurses at greater risk of earlier departure – it places the patients in their care at greater risk as well.