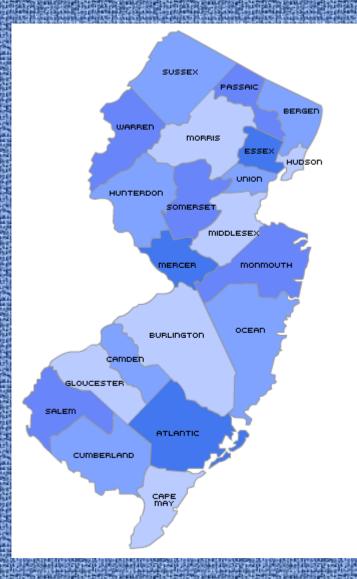# THE STATE OF THE NURSING WORKFORCE IN NEW JERSEY:

FINDINGS FROM A STATEWIDE SURVEY OF REGISTERED NURSES

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<u>EXECUTIVE SUMMARY OF FINDINGS</u>

Based on the findings of this extensive, statewide survey....

The "average" registered nurse licensed in New Jersey is a 50 year old woman who works more than 10 hours a day. But many, if not most days she feels that her patient workload prevents her from taking even a 30 minute meal break.

She has more than 24 years of nursing experience and considers herself a proficient to expert nurse. Yet, she has concerns that her patient workload is sometimes so high that it will cause her to miss an important change in a patient's condition. Sadly, she is also concerned about the nursing care that her patients needed during her workday but that she was unable to provide due to time constraints and not enough staff.

She is frequently exposed to patient complaints and verbal abuse. She feels little support from her manager and, despite her experience and skills she rarely receives recognition when she does a good job. She is teetering on the brink of emotional exhaustion.

Yet, despite these obstacles she maintains a sense of personal accomplishment. She knows that she makes a difference in her patients' lives.

Her challenge is to keep her patients safe and her mental health intact during the long and difficult workdays.

Our challenge is to create systems, processes, and environments that support her in her important work.

INTRODUCTION

According to projections by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services, New Jersey is facing a nurse shortage of unprecedented proportions. It is estimated that by 2020 the *supply* of registered nurses (RNs) in New Jersey will be *49% below demand*, resulting in a shortfall of 42,400 RN full-time equivalent positions throughout the State (Biviano, Dall, Fritz, & Spencer, 2004).

Such a gap between RN supply and demand would place an unimaginable strain on the State's healthcare system, patient safety, and the quality of healthcare in New Jersey. RN vacancy rates would reach record highs across practice settings; patients' access to needed care would be jeopardized. Patients' health outcomes would also be jeopardized, as research consistently demonstrates a link between higher RN staffing levels and fewer adverse patient events including mortality (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Agency for Healthcare Research and Quality, 2004; Estabrooks, Midodzi, Cummings, Ricker, Giovannetti, 2005).

There are several factors believed to contribute to the "perfect storm" that is decimating the supply of nurses at the state and national levels. At the core of the shortage is the seemingly simple explanation that the number of new RNs is growing at a slower rate than in past decades…..an increasing number of young people are selecting careers other than nursing. Therefore, as older nurses retire, there are insufficient numbers of younger nurses to replace them.

But, in addition to the difficulty in recruiting new people into nursing, there is the more subtle but related challenge of retaining those nurses who do exist. Reportedly, a growing number of nurses are leaving jobs that involve direct patient care, leaving the nursing profession, or leaving *both* due to overwork, job dissatisfaction, and burnout (American Association of Colleges of Nursing, 2007). Plagued by these challenges, it is little wonder that it is difficult to recruit young people into the profession.

In short, as New Jersey's population ages, and as public demand for high quality health care increases, the registered nurse is becoming an increasingly valuable, albeit, an increasingly scarce State resource. Yet, surprisingly, little is known about this endangered resource. What are the characteristics of the typical New Jersey nurse? What are the challenges that New Jersey nurses face during their workday? How prevalent is job dissatisfaction and burnout within the State's nursing workforce?

This survey, completed by approximately 25% of all RNs licensed in New Jersey, was conducted to provide insight into these questions. It is one of the largest and most comprehensive studies of nurses ever conducted in the State. Hopefully, this description of the "state" of the nursing workforce in New Jersey will inform the development of policy initiatives that will, indeed, better support our nurses in their important work.

METHODS

The survey is part of a larger collaborative project entitled *"The Multi-State Nursing Care and Patient Safety Study"* directed by Dr. Linda Aiken and her team at the University of Pennsylvania's Center for Health Outcomes and Policy Research (CHOPR). The New Jersey portion of the study, headed by Linda Flynn, Ph.D., R.N., was conducted by the New Jersey Collaborating Center for Nursing, Rutgers College of Nursing, and was funded by a generous grant from the Robert Wood Johnson Foundation. Also collaborating on the New Jersey survey was the New Jersey Board of Nursing, which provided additional funding as well as a list of registered nurses licensed in New Jersey.

To protect the rights of survey participants, the study was reviewed and approved by the Rutgers University Institutional Review Board prior to data collection. The comprehensive survey was mailed to the homes of 44,343 RNs, or approximately 50% of all RNs licensed and residing in New Jersey. Since a random half of all nurses statewide renew their licenses each biennium, all nurses residing in the State who renewed their license in the most recent biennial cycle were selected to receive the survey.

A modified Dillman (2002) method was used to ensure multiple contacts with survey recipients, including reminder postcards, a second mailing, and a third survey mailing to non-respondents. Surveys were mailed and collected from fall 2005 through spring of 2006. A total of 22,406 surveys were completed by New Jersey RNs, resulting in an acceptable survey response rate of 50.53%.

The extensive 10-page survey consisted of standardized measures with established reliability and validity, such as the Maslach Burnout Inventory (MBI; Maslach, 1986) and the Practice Environment Scale of the Nursing Work Index (PES-NWI; Lake, 2002). The remainder of the survey consisted of items developed and tested by the CHOPR team in previous research that was funded by a grant from the National Institute of Nursing Research (#NR004513) to Dr. Linda Aiken.

In summary, rich and extensive data from approximately 25% of all RNs licensed in New Jersey have been collected using rigorous research methods. The descriptive survey findings, which are presented in this paper, represent an initial installment of findings. Subsequent published papers are anticipated that will explore a variety of issues including quantification of the key predictors of nurse and patient outcomes.

SURVEY FINDINGS

I. PERSONAL CHARACTERISTICS

A. AGE

Findings from this survey indicate that an alarmingly high percentage of the current New Jersey Nursing workforce may be nearing the age of retirement. This finding is consistent with the national trend as reported by the 2004 National Sample Survey of Registered Nurses (HRSA, 2004). It is this loss of RNs through retirement attrition that has been identified as one of the leading contributors to the growing nurse shortages predicted in New Jersey and across the nation (American Association of Colleges of Nursing, 2007; Dickson, 2002).

In the current survey, there were only 3.8% of RNs who did not report their age. Among the 21,553 nurses who did respond to the question, the mean or average age among nurses was 51.3 years (SD = 11.1). This average age includes RNs who were retired as well as those who were not retired.

In contrast, the average, or mean age among the 20,205 RNs who reported they were **NOT** retired was a little younger -   49.7 years (SD = 10.11). This finding in New Jersey is consistent with the national average age of non-retired RNs, estimated at 46.8 years of age in 2004 (Biviano, Dall, Fritz, & Spencer, 2004).

Among the 20,205 RN respondents who were **NOT** retired, and therefore, still in the nursing workforce, Figure 1 illustrates the aging nursing workforce in the State:

>   54.4% of NJ RNs were between 46 and 60 years of age
>   13.3% of NJ RNs were more than 60 years of age

In all, 29% of non-retired RNs were older than 55 years of age. This finding indicates that, assuming that the majority of nurses retire at 65 years of age, **New Jersey will need <u>to replace a third of its nursing workforce</u> over the next 10 years.** Based on an estimated employed workforce of about 81,000 RNs, more than <u>23,000 replacement RNs will be needed over the next decade </u>just to maintain the <u>current</u> nurse supply. This number of replacement RNs does NOT reflect the additional numbers of RNs that may be needed to meet an increase in nurse demand that is anticipated due to the aging population or the numbers of dissatisfied nurses who may move to non-nursing positions. This finding is consistent with a report from the Health Resources and Services Administration (HRSA, 2004) which predicts that New Jersey will experience a shortfall of 42,400 RN full-time equivalent positions by 2020.
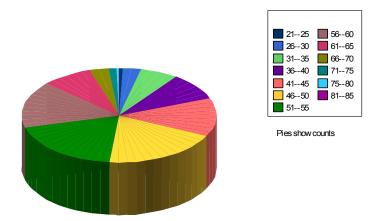
Figure 1. Age Distribution of Non-Retired New Jersey RNs (n = 20,205)

Legend:
- 21--25
- 26--30
- 31--35
- 36--40
- 41--45
- 46--50
- 51--55
- 56--60
- 61--65
- 66--70
- 71--75
- 75--80
- 81--85

Pies show counts

B. GENDER AND RACE

According to survey responses, only 3.5% of the sampled New Jersey RNs were males. This proportion of male RNs is somewhat less than the 5.7% estimated in the 2004 National Sample Survey of Registered Nurses (NSS; HRSA, 2004). Interestingly, the majority of male nurses in New Jersey (66%) were employed in hospitals. Only 2% of respondents failed to indicate gender.

Survey respondents were asked to report race / ethnicity in accordance with standard categories specified by the Office of Management and Budget. Table 1 demonstrates that the majority of the 22,406 survey respondents were white, non-Hispanic (72.7%), with the second largest group of RNs identified as Asian/Filipino/Native Hawaiian or Other Pacific Islander, non-Hispanic (11.0%). Comparisons of nurses' racial / ethnic characteristics from the New Jersey Survey with that of the National Sample Survey are also summarized in Table 1, and indicate that the RN workforce in the State is more culturally diverse, with a markedly higher proportion of RNs who are Asian/Filipino/Pacific Islanders. Similar to the findings of the 2004 National Sample Survey, 7.5% of survey respondents did not specify their race.

Table 1. Racial/Ethnic Characteristics of New Jersey RNs (n = 22,406)

	New Jersey Survey of RNs	National Sample Survey of RNs	New Jersey Population 2005[1]
White, non-Hispanic	72.7%	88.4%	76.6%
Black/African American, non-Hispanic	5.3%	4.6%	14.5%
Asian/Native Hawaiian or Other Pacific Islander, non-Hispanic	11.0%	3.3%	7.2%
Hispanic	2.1%	1.8%	15.2%
American Indian/Alaskan Native	0.1%	0.4%	0.3%
Two or more racial backgrounds	0.4%	1.5%	1.3%
Other	.9%	---------	---------
Not Reported	7.5%	7.5%	---------

C. YEARS OF NURSING EXPERIENCE

Among the 20,205 RNs who were not retired, the average or mean number of years they had been working in nursing was 24.3 years (SD = 11.8), indicating, overall, an experienced nursing workforce.

D. EDUCATIONAL PREPARATION

Country of Initial Nursing Education
Survey findings estimate that the proportion of foreign-educated nurses in New Jersey, totaling 11.7%, is more than three times higher than that reported nationwide in the National Sample Survey of Registered Nurses. Consequently, this higher percentage of internationally-educated nurses contributes to the cultural diversity of the New Jersey nurse workforce. The Philippines was the largest educational site for New Jersey RNs outside of the United States, educating 8.4% of the New Jersey nurses. The Philippines were followed by India (.8%), the United Kingdom (.5%), other Asian nations (.5%), Caribbean countries/territories (.3%), Africa (.3%), and Canada (.2%), and U.S. territories (.1%). Only 2.4% of the sample failed to indicate the country of their initial nursing education.

Level of Initial Educational Preparation
Figure 2 illustrates that the diploma program was the most common initial educational program for New Jersey RNs (40.8%), followed by an Associate Degree (32%), a Baccalaureate degree (27%) and a graduate program (0.3%); 5.7% of RNs failed to provide a valid response. These findings in New Jersey are in contrast to the national trends in that New Jersey has a higher proportion of diploma graduates. According to

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[1] U.S. Census Bureau 2005; available http://quickfacts.census.gov/qfd/states/34000.html

the 2004 National Sample Survey the Associate degree is the most common initial nursing preparation nationwide.
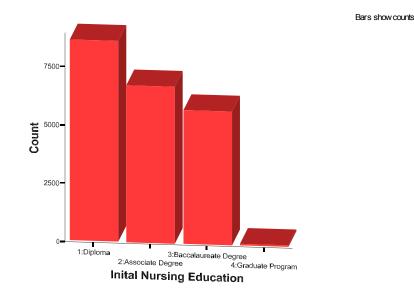
Figure 2. Initial Nursing Education of New Jersey

Bars show counts

Count

7500

5000

2500

0

1:Diploma
2:Associate Degree
3:Baccalaureate Degree
4:Graduate Program

Inital Nursing Education

Age at Initial Licensure
The age at initial RN licensure appears to be somewhat lower among New Jersey survey respondents compared to RNs nationwide. The mean age at time of initial licensure among New Jersey RNs was 25.5 (SD = 8.1), compared to 29.6 years of age as reported by the National Sample Survey of Registered Nurses. A total of 3.8% of nurse respondents either did not indicate their age when first licensed as an RN or reported an invalid response.

Continuing Education
Table 2 presents a summary of percentages of RNs from each level of initial nursing preparation that reported obtaining higher degrees in nursing. Approximately equal percentages of initial diploma nurses and initial associate degree (ADN) nurses continued their education to earn a baccalaureate degree in nursing (BSN); similarly, comparable percentages of initial diploma and ADN nurses continued their education to obtain a master's degree in nursing (MSN) as their highest degree.

A considerably higher percentage of initial BSN nurses, however, earned an MSN as their highest degree compared to the percentages of initial diploma and initial ADN nurses. This finding has implications for enhancing the faculty supply line in that BSN graduates appear more likely to obtain an MSN degree – the minimum educational requirement for a faculty/instructor position.

As summarized in Table 3, a slightly higher percentage of Associate degree graduates earned a Bachelor's degree in a discipline other than nursing.

Table 2. Highest Nursing Degree by Initial Preparation (n = 21,133)

	Associate	BSN	MSN	Doctorate
Diploma (n = 8,617)	2.4%	17.6%	7.1%	0.5%
ADN (n = 6,731)		17.9%	5.1%	0.2%
BSN (n = 5,724)			15.6%	0.6%
Graduate Program (n = 61)				3.3%

Table 3. Highest Non-Nursing Degree by Initial Preparation (n = 21,133)

	Associate	Bachelors	Masters	Doctorate
Diploma (n = 8,617)	2.8%	9.3%	6.5%	0.6%
ADN (n = 6,731)	5.8%	12.8%	4.1%	0.4%
BSN (n = 5,724)	1.0%	6.8%	7.5%	1.0%
Graduate Program (n = 61)		9.8%	14.8%	1.6%

In summary:

A total of 27.6% of RNs with a Diploma as initial preparation continued their education to obtain a higher degree in nursing, with 25.2% earning a BSN or higher.

A total of 23.3% of RNs with an ADN as initial preparation continued their education to obtain a BSN or higher in nursing.

A total of 16.2% of RNs with a BSN as initial preparation continued their education to obtain an MSN or higher in nursing.

A total of 3.3% of RNs with an MSN as *initial* preparation continued their education to obtain a doctorate in nursing. In contrast, only 0.6% of RNs with a BSN as their initial nursing education continued their education to receive a doctorate in nursing.

Overall, it appears that similar proportions of nurses with a diploma (17.6%), ADN (17.9%), or BSN (15.6%) as their initial education in nursing continued their education to obtain the *next highest* college degree. Small percentages of RNs, regardless of their initial educational preparation, continue their education to obtain *two* additional degrees.

Based on the finding that only a small proportion of RNs are likely to obtain *two* additional college degrees beyond their initial level of preparation, innovative initiatives may be necessary to facilitate the commitment to continuing education that is needed to effectively enhance the State's nursing faculty pipeline. The "fast-track" educational programs and articulation models such as "BSN to PhD" or "ADN to MSN," designed to provide a seamless progression through curricula, may be beneficial in facilitating

nurses' progression through the two additional college degrees necessary to qualify for a nursing faculty position.

II. PROFESSIONAL CHARACTERISTICS

A. EMPLOYMENT

Of the 22,406 New Jersey RNs who returned a survey, a total of 18,607 (83%) reported that they were currently employed, 7% reported they were not employed but NOT retired, and 9% reported they were retired. Less 1% failed to report their employment status.

Among the 18,607 New Jersey RNs who were **currently employed**, 96.5% reported that they worked in health care and 95% reported that an RN license was required for their job, indicating that they worked in nursing.

The 2004 National Sample Survey of Registered Nurses estimates that 79% of New Jersey RNs are employed in nursing. That percentage reported, however, is calculated based on the total number of RNs living and licensed in the State. In contrast, the percentage of RNs employed in nursing calculated for this report is derived from those RNs living and licensed in the State *and* who are currently employed.

B. PRACTICE SETTING

The percentage of New Jersey RNs working in hospitals as their primary employment setting is estimated to be similar to the national average of 56.2%, reported by the National Sample Survey of Registered Nurses. Likewise, the proportion of New Jersey RNs working in skilled nursing facilities is similar to the national average of 6.3%. In contrast, the proportion of New Jersey nurses employed as faculty in schools of nursing which survey findings estimate as between 1.0% and 1.6%, is lower than the national average of 2.6%.

Table 4 summarizes the primary employment settings of the 18,607 RNs who indicated they were currently employed.

Table 4. Practice Setting (n = 18,607)

SETTING	PERCENT
Hospital	55.7%
Ambulatory Care	8.2%
School Nurse	6.9%
Skilled Nursing Facility	6.4%
Home Health Care	6.2%
Community/Public Health	1.6%
Insurance Industry	1.3%
Pharmaceutical Industry	1.0%
Schools of Nursing	1.0%
Long Term Care (not nursing home)	1.0%
Mental Health	0.7%
Occupational Health	0.8%
Other Employment Settings	4.4%
Not Reported	4.8%
TOTAL	100.00%

Additionally, a total of 496 or 2.7% of employed RNs reported that they worked for staffing agencies as their *primary* job.

C. POSITION

The current positions of employed New Jersey survey participants are presented in Table 5.

Table 5. Positions Held By Currently Employed New Jersey RNs (n = 18,607)

POSITION	PERCENT
Staff Nurse	55.1%
Other Health Care Position	11.6%
Staff Educator / Quality Management	6.9%
Front Line Manager	6.5%
Nursing Administrator/ Mid-Executive	5.7%
Advanced Practice Nurse	3.7%
Nursing School Faculty	1.6%
Non-Health Care Position	2.6%
Multiple Positions	2.5%
Nurse Researcher	0.6%
On Leave / Not Currently Working	0.4%
Not Reported	2.8%
TOTAL	100.00%

C. EXPERTISE, AND CERTIFICATION

Regarding specialty certification, only 3.1% of the 20,205 non-retired New Jersey RNs failed to provide a valid response to the question. Of those who indicated their certification status, 40.2% reported they were certified by a national nursing specialty organization and 56.7% reported that they were not certified.

Nurses who provided direct patient care in hospitals, skilled nursing facilities, and certified home health agencies (n= 9,854) were asked to rate their level of clinical nursing expertise; 95% provided a valid response. Findings are summarized in Table 6.

Table 6. Self-Rated Clinical Competency (n = 9,854)

Advanced Beginner	1.0%
Competent	15.3%
Proficient	51.6%
Expert	32.2%

III. THE WORK ENVIRONMENT

Due to their important role in providing care to patients, RNs who provided direct patient care in hospitals, skilled nursing facilities, or Medicare-certified home health agencies were asked a series of questions regarding aspects of their work environments. Nurses working in these three settings were selected for more detailed questioning because these settings represent the practice continuum, ranging from acute to long-term care. Among all survey respondents a total of 44%, or 9,854 nurses worked as direct care providers in these practice areas. The nurses' responses are summarized below:

A. ADVERSE NURSE EVENTS

New Jersey RNs who provided direct patient care in the three practice arenas specified above (n = 9,854) were asked to report the frequency with which they experienced a variety of adverse events in their work settings. A summary of selected findings is presented in Table 7.

These findings are disturbing in that they indicate that RNs who provide direct patient care experience frequent and chronic exposure to verbal abuse, complaints, and work-related injuries. In total, 45% of direct care RNs reported experiencing verbal abuse from patients and families at least monthly, if not more. Almost one in five direct care RNs reported experiencing verbal abuse by patients and/or their families at least weekly.

In addition to verbal abuse, Table 7 indicates that RNs who provide direct care experience frequent work-related injuries, in that 17.8% of responding RNs experienced an injury at least monthly. This finding is consistent with reports from the Bureau of

Labor Statistics (2005) that identify health care settings as the industry with the second highest percentage of workplace injuries; higher than the construction industry and second only to manufacturing.

Table 7. Percent of direct care RNs reporting adverse nurse events (n = 9,854)

	Never	1 to 3 Times per Month	Weekly or More	No / Invalid Response
Patient Complaints	11.4%	25.7%	14.6%	12.1%
Verbal Abuse by Patients / Families	11.9%	26.6%	18.6%	6.8%
Verbal Abuse by Staff	34.9%	15.6%	8.1%	8.2%
Work-Related Nurse Injuries	19.8%	14.6%	3.2%	7.0%

B. LENGTHS OF WORKDAY AND WORKLOAD

Length of Workday / Shift
Direct care RNs from the three practice settings were asked to report the time of day they started work and the time of day they finished work on their most recent shift (n = 9,854). Among the 94% who responded to the question, lengths of the most recent workday / shift ranged from 3 to 20 hours, with a mean of 10.6 hours (SD = 2.2).

Workloads
Nurse workload was also examined among RNs providing direct patient care (n = 9,854). Several items were selected from the Individual Workload Perception Scale (IWPS), which has been found to be valid and reliable measure of RN workload across practice settings (Cox, 2003). The items measure nurses' **perception** of their workload and its perceived effect on their work life. Reports from New Jersey direct care nurses are presented in Table 8.

Table 8. Reports of Workload Among Direct Care RNs in NJ (n = 9,854)

	Percent of RNs	No / Invalid Response
Can't take 30-minute lunch break during work day	42.4%	5.9%
My workload causes me to miss important changes in my patients' conditions	**36.4%**	**6.4%**
Most days my workload is not reasonable	35.8%	6.2%
My current workload will cause me to look for a new position	32.5%	6.3%

These findings have obvious implications for patient safety. It is the responsibility of RNs to monitor patients and detect early changes in patients' conditions so that

physicians can be notified and appropriate actions taken to stabilize the patient. **Yet, more than 1 in 3 New Jersey RNs providing direct patient care report that their workloads are so heavy that they actually miss important changes in their patients' conditions.**

It is also cause for concern that, although they work, on average, a day that is more than 10 hours long, almost half of New Jersey RNs in this survey who provide direct patient care report that their workload prevents them from taking even a 30-minute meal break during their work shift.

Changes in Numbers of Patients Assigned Per Nurse
New Jersey nurses providing direct patient care (n = 9,854) were also asked to report if there had been changes in the number of patients assigned per nurse in their workplace over the last year. Aggregated across settings, **forty percent** of these New Jersey RNs reported that the number of patients assigned per nurse had **INCREASED** over the last year; only 4.7% reported that patient loads had decreased. A total of 6.5% of RNs did not provide a valid response.

Staffing Adequacy
In light of the mounting evidence linking nurse staffing levels and patient outcomes, the adequacy of nurse staffing was explored among New Jersey RNs who provide direct patient care. Items from the Nursing Work Index-Practice Environment Scale (PES-NWI; Lake, 2002), adopted by the National Quality Forum as the standard measure of work environment, were used to elicit nurses' perceptions regarding nurse staffing at their facility and unit.

A total of 53% of New Jersey direct care nurses reported that there were not enough registered nurses on staff in their institution to provide quality patient care. Similarly, 53.4% of direct care RNs responded that there was not enough staff to "get the work done."

C. NECESSARY CARE LEFT UNDONE

Using items that have been found to be reliable and valid in previous research, direct care RNs (n = 9,864) from hospitals, skilled nursing facilities, and home health were asked to report any patient care activities that were necessary but left undone during their *most recent* work shift / work day because they did not have the time to complete them. Less than 1% of direct care RNs failed to provide a valid response to the question.   Findings are summarized in Table 9.

Table 9. Reports of Care Left Undone by Direct Care RNs (n = 9,854)

	Percent of RNs
Patient Teaching Left Undone	31.0%
Necessary Documentation Left Undone	23.7%
Patient Surveillance Left Undone	17.3%
Necessary Skin Care Left Undone	14.5%
Patients' Preparation for Discharge Left Undone	13.0%
Medications Not Administered on Time	11.0%

These nursing care activities that New Jersey nurses report they had left undone due to time constraints are consistent with their reports of heavy workloads and an insufficient number of staff to provide quality patient care. The nurses' reports that they left necessary monitoring or surveillance of patients undone is also consistent with their reports that their workload caused them to miss important changes in their patients' condition.

Although there are anecdotal reports suggesting that most facilities in New Jersey are fully staffed, responses to these several items by direct care RNs in the State's hospitals, skilled nursing facilities, and home care agencies indicate that inadequate RN staffing remains a serious issue in some of the State's healthcare facilities.

A majority of RNs in this survey report that patient-per-RN ratios are increasing. Moreover, the majority report that RN staffing is inadequate in their facility to provide quality patient care.

These reports are consistent with nurses' descriptions of important patient care activities that they had to leave undone during their most recent shift / workday, and their assertions that their heavy workload causes them to miss important changes in their patients' conditions.

D. MANAGERIAL SUPPORT

Similarly, RNs providing direct patient care (n = 9,854) completed several items from the Practice Environment Scale of the Nursing Work Index (PES-NWI; Lake, 2002) that asked them to rate the degree of support they received from their nursing manager. Missing or invalid responses on most of these items were low, ranging from 4.5% to 5.5%. Nurses' responses are summarized below:

1) 43% of RNs did NOT consider their manager to be a "good manager"
2) 42% of RNs reported that nurse managers would NOT back them up when they were in conflict with a physician
3) 40% of RNs did NOT consider the supervisors at their facility to be supportive of nurses
4) 44% of New Jersey's direct care RNs reported that they did NOT receive praise or recognition when they had performed a "job well-done" at work

These findings are cause for concern. A supportive front-line manager has been consistently recognized as a correlate of nurse job satisfaction and retention. Likewise, adequate RN staffing and continuity of care have been associated with patient safety and superior patient outcomes. Yet, these findings indicate that many RNs in New Jersey who provide direct care do not feel that they have a supportive front-line nurse manager.

Since leadership skills such as conflict resolution and human resource management are most frequently taught at the master's degree level (Kramer, Schmalenberg, & Maguire, 2004), educational levels among those RN respondents who indicated their current position was that of a front-line nurse manager were explored. A total of 57.7% of front-line managers in New Jersey reported that their highest level of nursing education was either a diploma or an associate degree. This finding indicates that many nurse managers in New Jersey may not have had the opportunity to receive formal training and education in important managerial skills.

In summary, there are several problematic or negative aspects of the work environment reported by New Jersey RNs who provide direct patient care. These negative aspects include (1) chronic exposure to patient complaints, verbal abuse, and physical injuries; (2) unsatisfactorily high workloads that reportedly are jeopardizing patient safety and quality care; (3) nurse staffing levels that are reportedly insufficient for quality patient care; (4) necessary patient care activities that are left undone due to time constraints; and (5) perceived lack of support from front-line nurse managers.

IV. JOB AND CAREER SATISFACTION

A key aim of the survey was to determine whether New Jersey RNs who worked in nursing were satisfied with their jobs and their choice of nursing as a career. Consequently, the following analyses were conducted with survey respondents who indicated they were employed *and* that a nursing license was required for their current position (n = 17,394).

A. JOB DISSATISFACTION, INTENTIONS TO LEAVE, AND BURNOUT

Job dissatisfaction, intentions to leave their employer within the next 12 months, and emotional exhaustion (burnout) were explored among the 17,394 nurse respondents who were employed *and* required an RN license for their current position. These negative career outcomes were then examined in the subset of RNs who provide direct patient care in hospitals, skilled nursing facilities, and Medicare-certified home health care agencies (n = 9,854). Findings are presented in Table 10.

Burnout was measured by the nine items of the Emotional Exhaustion subscale of the Maslach Burnout Inventory. According to published norms for physicians and nurses, scores of 27 or above are indicative of high occupational emotional exhaustion or burnout (Maslach, 1986). The percentages presented in Table 10 represent those New Jersey RNs who scored 27 or higher on the Inventory, indicating they suffer from occupational burnout.

Table 10. Prevalence of Job Dissatisfaction, Intent-to-Leave, and Burnout in NJ RNs

	All RNs in Jobs Requiring License (n = 17,394)	RNs Providing Direct Patient Care (n = 9,854)
Dissatisfied with Job	18.8%	24.0%
Very Satisfied with Job	32.0%	23.1%
Planning to Leave Employer	12.1%	12.5%
Burnout	27.3%	32.3%

As noted in Table 10, almost one in four direct care RNs were dissatisfied with their jobs. The percentage of dissatisfied RNs is somewhat higher than that reported nationwide in the 2004 National Sample Survey of Registered Nurses, which indicates that 13.8% of RNs are dissatisfied with their jobs.

In contrast, the percentage of New Jersey direct care RNs who are "very satisfied" is somewhat lower than the 27% reported among RNs nationwide in the 2004 National Sample Survey of Registered Nurses. Although a recent study by the National Opinion Research Center at the University of Chicago found that 53.1% of the RNs polled

reported to be "very satisfied" with their jobs, this proportion was still markedly lower than that found among many other professions. In comparison, 80.1% of firefighters, 78.1% of physical therapists, 69.2% of teachers, and 60.8% of office supervisors were "very satisfied" with their jobs (Smith, 2007).

Regarding job-related burnout, the proportion of New Jersey RNs suffering from burnout is comparable to that found in other states and countries (Aiken, Clarke, & Sloane, 2002; Flynn & Thomas-Hawkins, 2007). This finding which indicates that approximately one in three New Jersey RNs are burned out is, nonetheless, distressing.

Occupational burnout is a serious job-induced, psychological condition that frequently results in high levels of anxiety, depression, somatic complaints, and other threats to psychological and physical health (Ahola, et al., 2006; Honkonen, et al., 2006). Maslach, a leading psychologist and burnout expert who has studied the condition in police officers, fire fighters, social workers, teachers, physicians, and nurses poignantly labeled the phenomenon "the cost of caring" (1982).

In addition to negative consequences for the individual nurse, a high proportion of burnout among New Jersey RNs also has important negative implications for the adequacy of the State's nursing workforce. Previous research has found that nurse burnout is a strong predictor of job dissatisfaction and intentions to leave the job (Gwede, Johnson, Roberts, & Cantor, 2005; Piko, 2005).

B. SATISFACTION WITH CAREER

Responses regarding satisfaction with nursing as a career and feelings of accomplishment are presented in Table 11. Less than 2% of survey RNs failed to respond to a question regarding satisfaction with nursing as a career.

Table 11. Satisfaction With Nursing as a Career

	RNs in Jobs Requiring License (n = 17,394)	RNs Providing Direct Patient Care (n = 9,854)
Satisfied With Nursing as Career Choice	88.5%	87.3%
Positively Influence Other Peoples' Lives *Everyday*	50.4%	48.4%
Accomplish Worthwhile Things on Job *Everyday*	48.4%	47.5%

These findings indicate that despite the challenges of workload, work environment, and burnout the majority of New Jersey RNs are satisfied with the profession of nursing as a career. Additionally, on a **daily** basis, many New Jersey nurses reported that they feel they are (1) positively influencing their patients and (2) feel a sense of accomplishment.

A small but significant correlation was found between these beliefs and nurses' satisfaction with nursing as a career (r = .10, p = .000; r = .14, p = .000, respectively). This finding suggests that nurses' beliefs in their positive contributions may contribute, at least in part, to their career satisfaction.

V. WORKFORCE CHARACTERISTICS BY RACE / ETHNICITY: EXPLORING DIFFERENCES

According to a report published by the Institute of Medicine (2004), there is a preponderance of empirical evidence supporting the importance of increasing racial and ethnic diversity among healthcare professionals, including the nursing workforce. The report notes that racial and ethnic minority patients are generally more satisfied with the care that they receive and may experience more satisfying patient-provider interactions when services are delivered by a racially concordant provider.

Yet, findings from this survey indicate that nurses of African American and Hispanic race / ethnicity are markedly underrepresented in New Jersey's nursing workforce when compared to the racial composition of the State's population. This under-representation of minority nurses in the State's workforce limits minority patients' access to nurses who may be better positioned to meet their cultural and linguistic needs.

To potentially inform initiatives aimed at recruiting *and* retaining underrepresented minority nurses, additional analyses were conducted to explore key characteristics such as education, position, job satisfaction, and perceptions of the work environment among African American and Hispanic RNs who responded to the survey. The findings are presented below.

A. EDUCATIONAL PREPARATION

As indicated by Table 12, African American and Hispanic RNs in New Jersey are more likely than Caucasian RNs to have earned a BSN degree (*O.R.* = 1.16 (1.0, 1.3) p = .014 and *O.R.* = 1.42 (1.2, 1.7), p = .000, respectively).

This finding is consistent with national trends. The 2004 National Sample Survey reports that the percentage of baccalaureate-prepared nurses is higher among African American RNs than among Caucasian RNs.

Table 12. Highest Level of Education Within Race / Ethnicity (n = 18,193)

	Caucasian (n = 16,484)	African American (n = 1,196)	Hispanic (n = 473)
Diploma	27.9%	17.8%	15.0%
Associate Degree	23.9%	29.2%	33.0%
BSN	28.5%	31.9%	37.6%
MSN	9.2%	9.3%	8.9%
Doctorate	0.4%	0.5%	0.2%
Missing Response	10.1%	11.3%	5.3%
Total	100%	100%	100%

B.   TYPE OF POSITION

The distribution of employment and position-type within racial/ethnic categories was explored among Caucasian, African American, and Hispanic nurse respondents who indicated they were **not** retired (n = 16,194).

As presented in Table 13, a higher percentage of African American and Hispanic RNs held staff nurse positions, but similar percentages of nurses within each racial/ethnic category held positions in management and administration. A smaller percentage of African American and Hispanic RNs worked as advanced practice nurses.

Table 13. Employed RNs: Type of Position Within Race / Ethnicity (n = 16,194)

	Caucasian (n = 14,649)	African American (n =1,083)	Hispanic (n = 462)
Staff Nurse	47.4%	51.9%	58.2%
APN	4.0%	2.2%	2.4%
Frontline Manager	6.1%	6.8%	7.1%
Administrator	5.5%	6.6%	6.1%
Staff Educator/QI	7.1%	6.0%	5.8%
Faculty	1.6%	2.3%	1.1%
Not Currently Working	8.5%	5.9%	5.0%
Missing/Invalid Response	1.6%	4.0%	3.0%

C. RACIAL / ETHNIC DIFFERENCES IN PERCEPTIONS OF THE WORK ENVIRONMENT

As in the general sample of survey respondents, perceptions of the work environment were explored among RNs who were employed as direct care providers in hospitals, skilled nursing facilities, and Medicare-certified home health care. The subsample of Caucasian, African American, and Hispanic direct care RNs from these settings totaled 7,233. As previously described, the Practice Environment Scale (PES; Lake, 2002) of the Nursing Work Index (NWI) is recognized by the National Quality Forum as the standard measure of nursing work environment. In addition to an overall or composite score, the PES-NWI is comprised of 5 subscales. African American/Hispanic RNs had significantly lower mean scores on the composite work environment scale, t (6,918) = 2.98, p = .003, as well as three of the five subscales: (1) Collegial Nurse-Physician Relationships, $t(6,909) = 4.76$, p = .000; (2) Nurse Manager Ability and Leadership, $t(989.45) = 2.40$, p = .016; and (3) Staffing & Resource Adequacy, $t(6,915) = 4.24$, p = .000.

These findings are concerning in that, overall, African American/Hispanic nurses rated key aspects of their work environment, such as relationships with their manager and relationships with physicians, as less positive and less supportive than did Caucasian nurses.

D. RACIAL DIFFERENCES IN JOB SATISFACTION

Similar to the analysis of job satisfaction conducted in the general sample of survey respondents, differences in job satisfaction between Caucasian and African American/Hispanic RNs was explored among nurse respondents who were employed **and** required an RN license for their current position (n = 13, 721). Job satisfaction was rated on a scale ranging from 1(very dissatisfied) to 4 (very satisfied). Findings indicate that African American/Hispanic nurses were significantly less satisfied with their jobs (*M* = 3.00, *SD* = .82) compared to their Caucasian colleagues (*M* = 3.10, *SD* = .81), $t(1,655.21) = 4.42$, p = .000.

Compared to Caucasian nurses, African American/Hispanic nurses also had a significantly lower mean satisfaction score on the following job traits:

> Satisfaction with opportunities for advancement, $t(1,627.96) = 5.29$, p = .000
> Satisfaction with independence at work, $t(13,525) = 6.80$, p = .000
> Satisfaction with professional status, $t(1,680.64) = 2.69$, p =.007
> Satisfaction with work schedule, $t(13,584) = 4.16$, p = .000

In summary, African American and Hispanic RNs in New Jersey are a well-educated and invaluable component of the State's nursing workforce. Unfortunately, findings

from the New Jersey survey of nurses indicate that African American/Hispanic RNs had significantly lower job satisfaction scores, and significantly lower ratings of their practice environment compared to Caucasian RNs.

These differences are troubling. Clearly, this finding requires further investigation to identify those factors which contribute to lower job dissatisfaction and practice environment ratings among African American and Hispanic nurses. Once contributors are identified, evidence-based initiatives can be developed and implemented to enhance the recruitment, job satisfaction, and retention of minority nurses in New Jersey.

SUMMARY AND RECOMMENDATIONS

☼ Findings from this extensive statewide survey indicate that the average registered nurse in New Jersey is 50 years old, and that approximately one third of New Jersey RNs will be retiring over the next 10 years. Conservatively, more than 23,000 replacement RNs will be needed by 2016 just to *maintain the current* nurse supply.

In order to maintain a nursing workforce in the State that is adequate to meet the needs of New Jersey residents, it is imperative to increase the number of students who are recruited, admitted, and educated at New Jersey's schools of nursing. Yet, each year qualified students are turned away from New Jersey's schools of nursing due to limitations in the schools' capacities. Prominent among these limitations, are difficulties in recruiting and retaining nursing faculty (Dickson & Flynn, 2005).

❑ **Strategies must be designed to not only increase student recruitment into nursing but to also increase the educational capacity of the State's schools.**

❑ **Since findings indicate that only a small proportion of RNs obtain *two* additional degrees beyond their initial education, the development of more fast-track programs such as the "BSN to PhD" and the "ADN to MSN" may help to enhance the nursing faculty pipeline.**

Even with a significant increase in nurse graduates, it is unlikely that the projected deficit in New Jersey between RN supply and demand will be eliminated over the next decade and beyond. Therefore, across practice settings, careful consideration must be given to the role of the registered nurse.

❑ **Responsibilities and job descriptions of RNs must be redesigned to efficiently utilize the specialized skills and education of registered nurses in ways that maximize the delivery of quality care and the attainment of positive patient outcomes.**

❑ **Incentives for registered nurses to postpone their retirement should be explored. Adjustments in the workplace such as "short" work shifts, flexible scheduling, and assigned activities with low physical demands, such as patient teaching and monitoring, may keep more retirement-age RNs in the workforce.**

☼Findings also indicate that approximately 24% of New Jersey RNs currently providing direct care to patients are dissatisfied with their jobs. The relatively high prevalence of job dissatisfaction among this important group of New Jersey RNs is disturbing, especially in light of the projected gap between nurse supply and nurse demand in the State (Biviano, Dall, Fritz, & Spencer, 2004; Dickson, 2002). Nurses' reports regarding their high workloads and patient-to-nurse ratios may provide some insight into the source of their job dissatisfaction.

☼Equally important are nurses' reports, in this survey, of the important patient care activities that they leave undone due to their high workloads. Clearly, these necessary care activities, such as patient monitoring, skin care, timely medication administration, patient teaching, and documentation are essential to patient safety and quality of care. In addition to threatening the safety and well-being of New Jersey patients, the nurses' inability to accomplish these activities is, most likely, an important contributor to their job dissatisfaction and intentions to leave their jobs.

- **Across all practice settings, patient-to-nurse ratios must be maintained at levels that allow RNs to complete their essential patient care activities.**

- **Again, the responsibilities of RNs must be re-examined to ensure that their time and specialized skills are used for activities that are essential to achieving positive patient outcomes.**

☼African American and Hispanic nurses are underrepresented in the nursing workforce, both nationally and in the State. Consequently, it is especially important to retain those African American and Hispanic nurses that are currently practicing in nursing, as well as implement initiatives to recruit more minority students into nursing.

Findings from this survey, however, indicate that African American and Hispanic RNs currently practicing in the State are less satisfied with their jobs compared to their Caucasian colleagues. Additionally, they perceive their relationships with their nurse managers and physicians in the work setting to be less positive and less supportive than do white RNs.

- **Additional research is needed to identify factors that contribute to these differences in job satisfaction and ratings of the work environment across racial groups.**

- **Management development programs designed to enhance the cultural competence and leadership skills of nurse managers may be a viable strategy for improving relationships between nurses and managers across all racial / ethnic categories. More highly skilled nurse managers may also be instrumental in enhancing collegiality between nurses and physicians.**

☼Similarly, based on several items measuring managerial support in the workplace, more than **40%** of direct care RNs responding to this survey indicated they did **NOT** feel supported by their nurse manager, nor did their reports reflect confidence in their nurse managers' abilities.

This finding is, indeed, cause for alarm. A competent and supportive nurse manager enhances nurse recruitment and retention, nurse productivity during the workday, and

job satisfaction (Kramer, Schmalenberg, Maguire, 2004). Research has consistently associated higher levels of managerial and organizational support with higher levels of nurse job satisfaction and lower rates of burnout in acute and non-acute settings, and across samples of nurses from differing countries of origin (Aiken, Clarke, & Sloane, 2002; Aiken & Flynn, 2002; Flynn, 2007). In addition to reportedly high workloads, lack of managerial support may be an important contributor to the high prevalence of emotional exhaustion, or burnout, found in the large sample of New Jersey RNs.

Yet, the role and responsibilities of front-line nurse managers are becoming increasing complex and include budgeting, patient care management, human resource management, and risk management; managerial and leadership skills that are frequently taught only at the masters' level. Given that the majority of the front-line managers responding to this survey had a diploma or associate degree as their highest level of education, some additional education and training in management and leadership skills may be warranted.

> ❑ **A nurse manager development program, implemented across the State, may be a crucial step toward increasing the leadership and managerial effectiveness of New Jersey's front-line nurse managers. Foci of the development program should include skill-building in cultural competency, conflict resolution, team building, personnel coaching, and human resource management.**

In conclusion, New Jersey's nurse workforce is being demolished by (1) an inadequate pipeline of new nurses, (2) an existing labor pool that is aging, (3) a critical shortage of nursing faculty, and (4) an alarming prevalence of job dissatisfaction and burnout among practicing nurses. Yet, to ensure patient safety and continued access to healthcare, an adequate nursing workforce in New Jersey must be sustained and preserved.

Healthcare stakeholders across the practice spectrum are needed to develop and implement strategies to prevent excessive RN workloads, reduce job-related burnout, ensure nurses have time to complete necessary care activities, and enhance the managerial and leadership skills of front-line nursing managers.

Working together, much can be accomplished when good intentions are translated into effective action.

"I think one's feelings waste themselves in words; they ought all to be distilled into actions which bring results"   ---------- Florence Nightingale

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