

*I do love nursing, but it is a stressful, demanding, little understood job.*

—45-year-old Registered Nurse from Greater Minnesota.

*I am trying to come to terms with disappointment that I feel that my 25 years as a loyal employee meant nothing to the employer and that my skills were disregarded in the face of personal ambitions. I hope other nurses are not dealing with this same disappointment.*

— 53 year-old Registered Nurse from Greater Minnesota.

*Working for a public health agency in a rural area has been great in that we nurses are able to work like a team, not to mention the wonderful flexibility of the hours.*

—27-year-old Public Health Nurse from Greater Minnesota.

# Findings from the Minnesota Registered Nurse Workforce Survey

*I am given a great deal of autonomy and independent decision making freedom. This is very important to me.*

— 44 year-old Registered Nurse from the Duluth area.

*Nursing is a very non-glamorous career.*

—45-year-old Nurse Manager from the Suburban Twin Cities.

**January 2003**

*I am most frustrated by the increasing amount of paperwork and the decreasing amount of time I have to actually take care of patients and residents.*

—45-year-old Assistant Director of Nursing from Greater Minnesota.

*Nursing is a great profession! Not only has the educational preparation helped me with personal and family problems it has allowed me the security to know I will always have a job. That is very important to a single mom.*

— 43 year-old Registered Nurse from the Rochester area.





# Executive Summary

## Introduction

An aging Registered Nurse (RN) workforce combined with stagnant graduation trends, strong employment and wage growth for nurses, increased staff turnover and heightened employer demand have contributed to the creation of an acute shortage of RNs in Minnesota. Encouraged by the state's nursing educators, health care providers and professional nursing organizations, the Minnesota Department of Health's Office of Rural Health and Primary Care (ORHPC) initiated an effort to collect detailed nursing workforce information that could be used by policy makers and workforce planners to address the current shortage of RNs.

This report presents an overview of findings from the first project to be completed under this initiative, *The Minnesota Registered Nurse Workforce Survey*. The survey was designed to collect detailed information on the state's RN workforce including demographic, education, employment, future planning and job satisfaction information that can be used by workforce planners and policy makers to address the shortage. Administered by ORHPC in early 2002, the survey seeks to fill in some of the current knowledge gaps through a comprehensive workforce survey of actively licensed RNs across practice settings. Approximately 3,645 randomly selected RNs from eight regions of the state were selected to participate in the survey. A total of 2,274 completed surveys were received for a response rate of 62.4 percent. Key findings from the survey include:

## Nursing Background

The RN workforce was predominantly white, non-Hispanic (98 percent). Even though more students of color have entered Minnesota nursing educational programs in the last few years, the racial and ethnic distribution of RNs will not reflect the larger demographic make-up of the state's population for many years. Most RNs (70 percent) identified "to comfort and care for those in need" as one of the top three things that motivated them to select a career in nursing.

## Education and Licensure

It is important to remember that when calculating the supply of workers, the state should not be considered in isolation. RNs typically cross regional, state and national boundaries in search of employment, either after graduation or upon leaving a job. Survey findings underscore the fact that Minnesota schools do not prepare all of the RN graduates needed to fill positions in the state. Seventy-two percent of RNs graduated from a Minnesota high school. High school graduates from bordering states (South Dakota, North Dakota, Wisconsin and Iowa) accounted for another fifteen percent of the workforce. Eighty-six percent of the state's RNs with an associate degree received that degree from a Minnesota institution. The proportion of diploma and baccalaureate prepared nurses who received their education in Minnesota was slightly lower — 72 percent and 70 percent respectively.

## Current Employment

RNs earned, on average, \$26.70 per hour at their primary worksite. Those RNs working in Minneapolis and St. Paul earned, on average, \$29.18 or about \$2.50 per hour more than the state average. RNs in Greater Minnesota earned \$24.12 per hour or about \$2.50 per hour less than the state average and almost \$5.00 per hour less than RNs working in Minneapolis and St. Paul.

RNs had a median job tenure of ten years and average job tenure of 12 years in 2002. Not all of those starting a new job in the last three years were new graduates or were younger than 35 years old. In fact, the median age of those starting new positions in the last three years was 44 years old. This finding further reinforces the view that a shortage of registered nurses is currently creating incentives and opportunities for RNs to change jobs.

## Future Plans

An estimated fifteen percent of active RNs planned to leave nursing in the next two years. Using the most recent employment estimate for the state's licensed RN workforce (54,920), this finding translates into an estimate of approximately 8,000 RNs who plan to leave the profession in the next two years. To place this estimate in

context, between 1996 and 2000 an estimated 3,000 new RN licenses were issued annually, mostly to individuals educated outside of Minnesota. Using the two estimates suggests that there may be a gap between supply and demand of approximately 2,000 RNs by the end of 2003.

## **Job Satisfaction**

RNs viewed themselves as highly skilled workers, and almost all RNs who provided direct patient care agreed that the work they do is important (98 percent). Yet, one out of every four RNs indicated that they would not encourage others to pursue a career in nursing.

While RNs generally felt that their personal level of pay was satisfactory (66 percent), the majority felt that they and their nursing colleagues remain underpaid for the work they do. When asked if they felt that they were appropriately compensated for the work expected of them, the findings reveal an equal split — 46 percent equally agreed and disagreed.

With regard to patient care, most RNs (75 percent) felt that they had sufficient input into the program of care for each patient. Yet, only 46 percent of RNs felt they had sufficient time for direct patient care. Eight of every ten RNs also felt that there is too much clerical and “paperwork” required in their job. Many RNs felt that barriers exist that hinder their ability to move beyond providing adequate care to providing superior care for patients. Almost seven out of every ten RNs agreed with the following statement: “I could deliver much better care if I had more time with each patient.” That statement is further affirmed by a similar percentage (68 percent) of RNs who agreed with the statement that they could deliver a better care plan if they didn’t have so much to do all the time.

## **Summary and Conclusion**

In conclusion, survey findings strongly suggest that efforts to increase nursing educational capacity could be ineffective if an overwhelming number of nurses leave the profession — an estimated 15 percent of RNs planned to leave the profession in the next two years. Increasing the supply of RNs in the long-term is needed but should be done with careful consideration for the ebb and flow of RN workforce within the state. Therefore, policymakers may want to consider additional financial incentives, such as scholarships and loan forgiveness, which help to target nursing graduates to areas with the greatest need.

Survey findings underscore the fact that the stability of the RN workforce in Minnesota is critical to the current and future delivery of quality patient care. The fact that a large majority of RNs surveyed identified the desire “to comfort and care for others” as the main reason they entered the profession must be kept at the center of any further efforts to recruit and retain nurses.

Minnesota currently faces a number of important health care issues, including rising premium costs, access to affordable prescription drugs, and uneven geographic access to health care services. Making matters worse, the state faces a growing shortage of health care workers, particularly in nursing. News of the shortage has slowly made its way to the public and state policymakers. In 2001, the shortage was documented by the media in their coverage of the contract negotiations and strike at several Twin Cities hospitals.

## Background

The shortage of registered nurses (RNs) in Minnesota has placed a renewed emphasis on the need to gather up-to-date information on the supply of and demand for registered nurses. Counting the number of employer job openings and students graduating from Minnesota programs, and describing the employment characteristics of the workforce provides a useful starting point for policy makers, educators, and the general public.

The largest health care occupation in both the nation and the state is registered nurse, with approximately 2.2 million jobs nationally and over 50,000 jobs in Minnesota. At present, employers' demand for RNs has outpaced the supply of available workers. The demand for RNs has increased dramatically during the last decade — a 20 percent increase in real wages (1990 to 2000), 44 percent growth in employment, and 2,930 current job openings in Minnesota.<sup>1</sup>

On the supply side, the number of RN candidates trained in state schools did not increase in the 1990s but remained stable with approximately 1,500 graduates annually. The RN workforce, composed mostly of women, also continues to age. RNs in Minnesota were three years older than those in the rest of the nation (45.3 versus 42.4) in 2000. Those working in rural areas were, on average, older than those in urban areas.<sup>2</sup>

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<sup>1</sup> *Registered Nurse Workforce Profile*, Office of Rural Health and Primary Care, Minnesota Department of Health, February 2001 and Minnesota Job Vacancy Survey, Second Quarter, 2002, Minnesota Department of Economic Security.

<sup>2</sup> *Registered Nurse Workforce Profile*.

## Survey Objectives

While this supply-demand profile is a useful starting point to understanding the shortage, it fails to adequately address more specific questions about the state's RN workforce. Encouraged by the state's nursing educators, health care providers and professional nursing organizations, the Minnesota Department of Health's Office of Rural Health and Primary Care (ORHPC) initiated an effort to collect detailed nursing workforce information that could be used by policy makers and workforce planners to address the current shortage of RNs. The recently completed *Minnesota Registered Nurse Workforce Survey* is the first project to be completed under this initiative and was designed to gain reliable and statistically valid information about the state's RN workforce.

## Methodology

Administered by ORHPC in early 2002, the survey seeks to fill in some of the current knowledge gaps through a comprehensive workforce survey of actively licensed RNs across practice settings. Approximately 3,645 randomly selected RNs from eight regions of the state were selected to participate in the survey. All registered nurses sampled received self-administered questionnaires that were anonymously returned by mail. A total of 2,274 completed surveys were received for a response rate of 62.4 percent. Statistical weights were developed to adjust for survey non-response and probability selection error. The analysis presented in this report is based on weighted survey responses. For more information on how the survey instrument was developed and administered see Appendix A.

Through the nine-page survey, RNs provided the following information:

- **Nursing Background**  
Data includes personal information like gender, race and marital status; household income and wage earning status; union membership; and reasons for choosing a career in nursing.
- **Education and Licensure**  
Data includes educational information from high school through graduate school; advanced practice data; and licensure and employment status.

- **Current Employment**  
Data includes information on current nursing and non-nursing employment; employment location; job titles and practice information; and wages and hours.
- **Previous Employment**  
Data consists of previous nursing-related employment; employment location; job titles and practice information; wages and hours; and reason for leaving position.
- **Future Plans**  
Data is from questions regarding the future educational and professional choices RNs intend to make.
- **Job Satisfaction**  
Data is based on the nationally tested Index of Work Satisfaction for employment-related opinions of RNs in direct care settings through 45 questions.

Written comments by RNs (such as those that appear on the cover of this report) were also gathered through the survey instrument.

The survey data provide a powerful analytical tool for exploring the state's RN workforce. For example, given the length of the survey and questions covered, it is possible to stratify each job satisfaction question using a wide variety of criteria, including an RN's employment region, nursing educational attainment, age, marital status, household income, hours worked, practice site, union membership, and employment tenure, to name just a few. A public data set with documentation was created for use by researchers, policy makers, and educators.<sup>3</sup>

## Report Focus

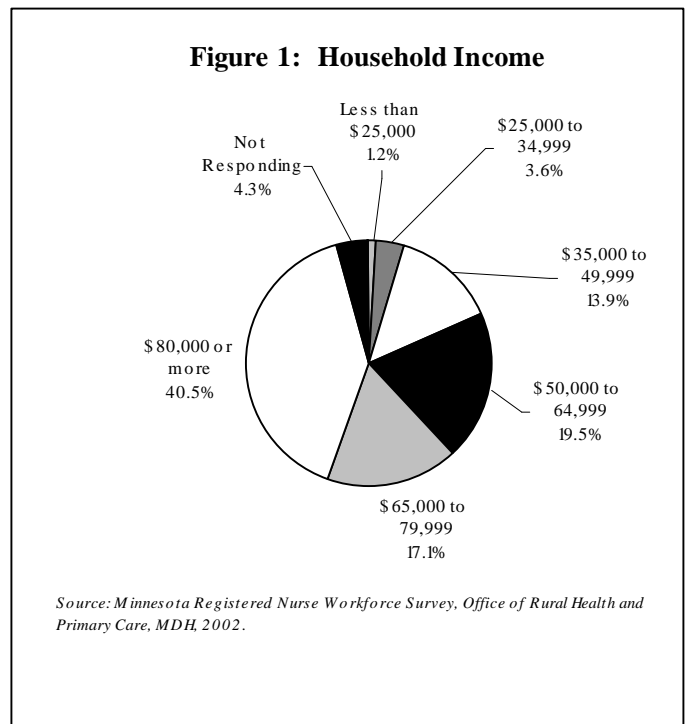
This report focuses specifically on an analysis of statewide results. More detailed reports on specific aspects of the survey data, such as job satisfaction, will be produced by the Minnesota Department of Health in 2003. This report also seeks to use the new survey findings to address six important RN workforce questions:

- Why do Minnesota RNs choose nursing as a career?
- What proportion of the state's RN workforce was trained in Minnesota?
- How long do RNs stay with an employer?
- How many RNs plan to leave the profession in the next two years?
- How many RNs will the state need in the future?
- Are RNs satisfied with their wages and their care-giving roles in the delivery of health care services?

## Nursing Background

Findings from the survey reveal that:

- The RN workforce was predominantly white, non-Hispanic (98 percent). Even though more students of color have entered Minnesota nursing programs in the last few years,<sup>4</sup> the racial and ethnic distribution of RNs will not reflect the larger demographic make-up of the state's population for many years.
- Most RNs reported a household income above \$50,000 in 2000 (see figure 1). RNs in single-headed households earned less — 50 percent reported a household income of less than



<sup>3</sup> For those interested in finding out more about using this dataset, please call Michael Grover at (651) 282-5642, or go to [www.health.state.mn.us/divs/chs/workdata.htm](http://www.health.state.mn.us/divs/chs/workdata.htm).

<sup>4</sup> *Minnesota Nursing Student Profile*, Office of Rural Health and Primary Care, Minnesota Department of Health, April 2002.

\$50,000.

- Most (81 percent) RNs reported being married. Eight percent were divorced, and another seven percent were single, never married. One-third reported having no dependent children.
- RNs were more likely to reside in communities with populations above 15,000 people.
- A majority of RNs (60 percent) reported being the primary wage earner for their household. Married RNs were less likely (27 percent) to identify themselves as the primary wage earner.

### **Why do Minnesota RNs choose nursing as a career?**

The survey also asked respondents to identify why they chose nursing as a career. National studies of why men and women enter nursing often cite an individual's desire to care for others as the primary reason. Survey findings reveal that Minnesota RNs generally follow this national norm.

The survey asked respondents to list their top three reasons (out of ten choices listed) for choosing a career in nursing. Overall, approximately 70 percent identified "to comfort and care for those in need" as one of the top three things that motivated them to select a career in nursing (see figure 2). This reason also garnered the most first choices. Another 47 percent joined the nursing profession because they wanted to be a part of a respected profession. This was followed by another 40 percent who indicated that they had been influenced by a friend or relative or by a personal health care experience.

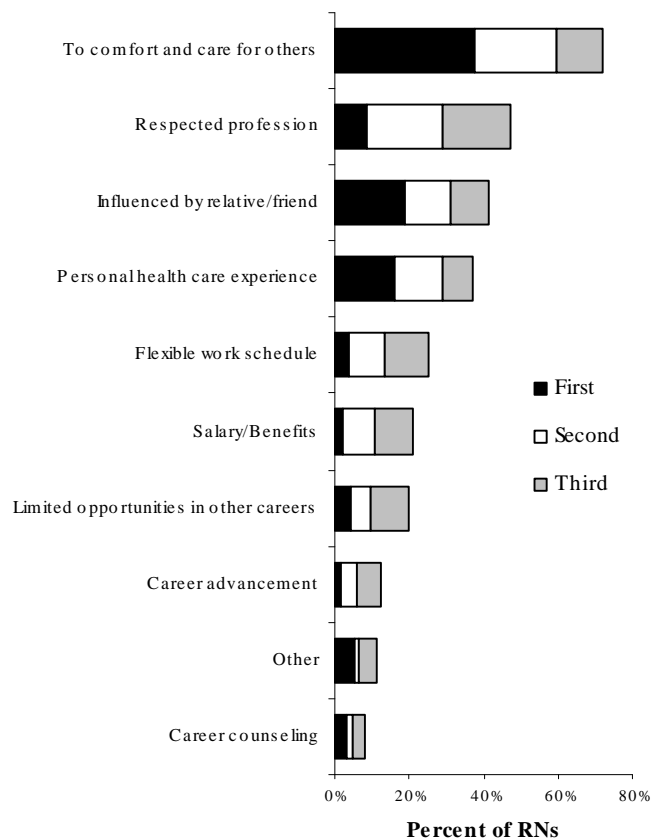
Very few respondents cited career counseling as the reason they entered the profession. With new efforts underway in the state to reach out to those who traditionally do not go into the nursing profession, it will be interesting to see if more students are influenced by counseling in the future.

## **Education and Licensure**

One widely discussed long-term solution to the registered nurse shortage is to increase the supply of RNs. However, it is unclear if this solution, which requires an expansion in the capacity of the state's post-secondary institutions, will lessen the shortage.

It is important to remember that when calculating the supply of workers, the state should not be considered in isolation. Minnesota schools do not prepare all of the RN graduates needed to fill positions in the state.

**Figure 2: Reason for Choosing a Career in Nursing**  
(Top Three Reasons)



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

Nor do all nurses prepared by Minnesota schools remain in the state to practice. For example, an analysis of licensing data from the Minnesota State Board of Nursing reveals that approximately 64 percent of actively licensed RNs received their education from a Minnesota institution at the time they were licensed.<sup>5</sup> Since the Board of Nursing does not record additional nursing education information, this estimate of Minnesota-trained RNs is probably low. Still, it is illustrative of the fact that RNs typically cross regional, state and national boundaries in search of employment, either after graduation or upon leaving a job. Over time, the ebb and flow of RNs becomes an important factor in influencing the supply and demand balance for

<sup>5</sup> Estimate based on a calculation of license expiration using registered nurse license data from the Minnesota State Board of Nursing.

Minnesota and other states in the upper Midwest region.

**What proportion of the state’s RN workforce was trained in Minnesota?**

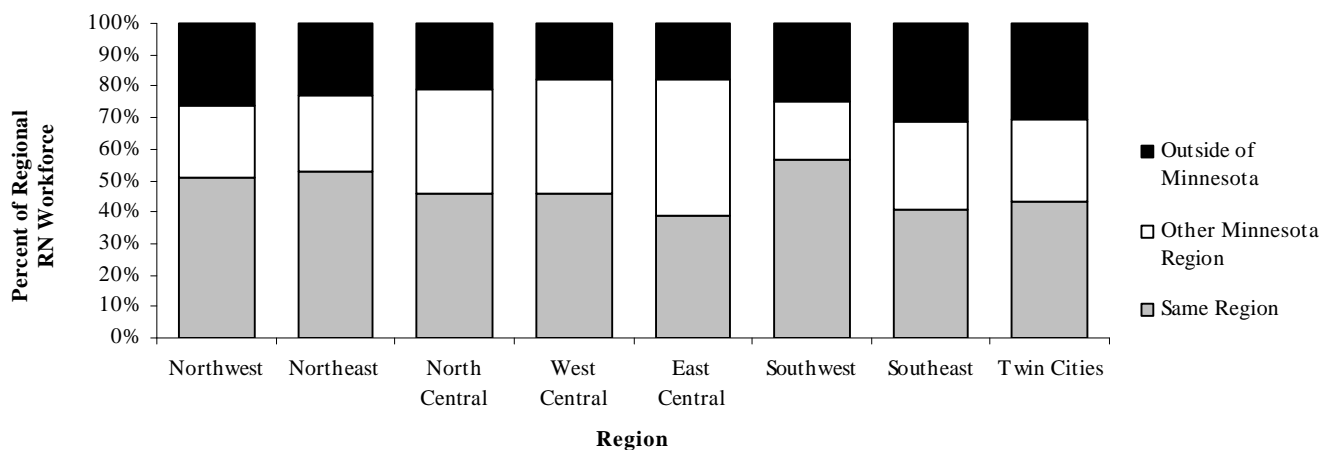
The new survey adds to our knowledge of the supply of RNs by seeking to establish patterns of educational attainment based on geography. These patterns are important for educators and policy makers to consider as they contemplate where to add additional nursing educational capacity in the state. When examining geographic educational attainment patterns, the survey found that 86 percent of the state’s RNs with an associate degree received that degree from a Minnesota institution. The proportion of diploma and baccalaureate prepared nurses who received their education in Minnesota was slightly lower — 72 percent and 70 percent respectively.

One way to explore these attainment patterns further is by examining where the current RN workforce went to high school. According to the survey results, 72 percent of RNs graduated from a Minnesota high school. High school graduates from bordering states (South Dakota, North Dakota, Wisconsin and Iowa) accounted for another fifteen percent of the workforce. Since the survey asked respondents where they went to high school, an important follow-up question can also be addressed: Is the region in which an RN grew up (i.e., where they went to high school) the same region they work in today?

Examined from one perspective, the supply of any region’s registered nurse workforce is composed of three groups — RNs who were high school graduates from that region, RNs who were high school graduates from another Minnesota region, and RNs who were high school graduates from another state or country (see figure 3). The southwest region’s current RN workforce had the highest proportion (57 percent) of high school graduates from that region compared to other regions. Other parts of the state, such as the east and west central regions, had a higher percent of their workforce graduate from high schools in different regions. In fact, the east central region had more RN graduates who had graduated from high schools in other regions (39 percent graduated from the same region and 43 percent from another Minnesota region). High school graduates from other states made up the smallest proportion of the current regional workforce in the central regions (18 percent) and the highest in the southeast and Twin Cities regions (31 percent).

Knowing the high school origins of a region’s workforce only tells part of the story. Using additional survey data, additional educational attainment information can be added to the analysis. In doing so, the question can be refined: Where did the students who currently work as RNs in the region receive their RN education?

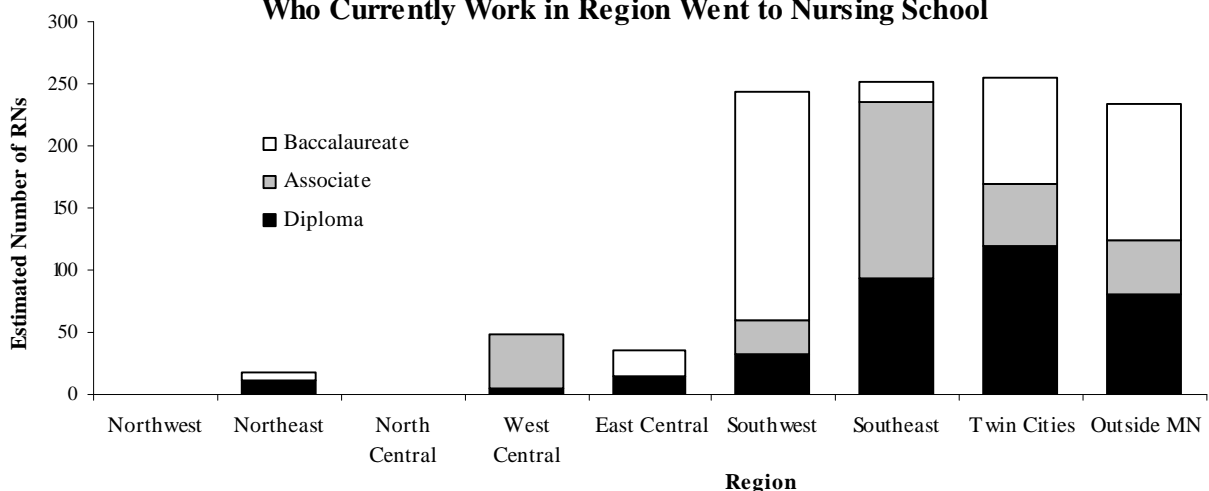
**Figure 3: High School Graduation Origins for the Current Regional RN Workforce**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.



**Figure 4: Where Southwest Regional High School Graduates Who Currently Work in Region Went to Nursing School**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

To answer this question, the southwest region, which had the largest proportion of regional high school graduates, is examined. Approximately one-fifth of the southwest region’s high school graduates stayed in the region to complete their nursing education (see figure 4). The majority who went to nursing school in their “home” region received a bachelor’s degree. However, regional high school graduates were more likely to go to school in another part of the state for their nursing education — the southeast region (23 percent) and the Twin Cities (24 percent). A sizeable proportion (22 percent) also went outside the state to receive their nursing education.

Where did the other non-regional high school graduates (43 percent) receive their education? Of those who went to high school outside the southwest region, roughly half (51 percent) received their nursing education outside of the state, followed by the Twin Cities (17 percent) and the southeast region (15 percent). Only nine percent were educated in the southwest region.

Missing from this analysis, of course, is the transitional employment patterns that link each RN’s nursing education site to their current practice location. Still, for the southwest region of the state, data from the survey reveal several important findings. First, while a large number of southwest high school graduates who become RNs remained or returned to practice in that region (57 percent), most received their nursing education from a school

outside the region or outside of Minnesota. Second, nursing schools in South Dakota have an important influence on the RN workforce in southwestern Minnesota. Of those RNs who went to high school and currently work in the southwest region, 16 percent received their nursing education in South Dakota. Consequently, South Dakota’s efforts to expand the supply of RNs (South Dakota House Bill 1296) by expanding nursing education programs at South Dakota State University and the University of South Dakota will likely have a constructive impact on the supply of registered nurses in southwestern Minnesota.<sup>6</sup>

This finding reinforces the fact that shortages do not know political boundaries and, depending on the region of the state, outside factors — in this case RNs being trained in another state — have an important influence on one regional RN workforce. The findings in this section strongly suggest that an analysis of workforce flows is important before states and regions embark on a strategy to increase their supply of RNs. Failing to accurately identify these pre-existing workforce flows may severely undermine efforts to create a “grow your own” strategy, especially if nursing graduates traditionally leave the region and no incentives to stay (e.g., loan forgiveness) are developed.

<sup>6</sup> See <http://legis.state.sd.us/sessions/2002/index.cfm>.

## Current Employment

Of those RNs with an active Minnesota license who were currently employed, the survey reveals that:

- Sixty-two percent reported a registered nurse job title.<sup>7</sup> The second most common job category was manager and supervisor (eight percent), followed by advanced practice nurse (five percent).
- Approximately 40 percent reported working no overtime hours during an average pay period. Forty-five percent reported working less than ten hours of overtime during an average pay period.
- RNs earned, on average, \$26.70 per hour at their primary worksite.<sup>8</sup> Those RNs working in Minneapolis and St. Paul earned, on average, \$29.18 or about \$2.50 per hour more than the state average. RNs in Greater Minnesota earned \$24.12 per hour or about \$2.50 per hour less than the state average and almost \$5.00 per hour less than RNs working in Minneapolis and St. Paul.
- Current union members earned an average hourly wage of about 85 cents more per hour than RNs that are nonunion — \$27.32 and \$26.45, respectively.
- Twelve percent of RNs were employed by more than one health care employer. Almost five percent of RNs also worked outside of nursing in a position that did not require a current license.

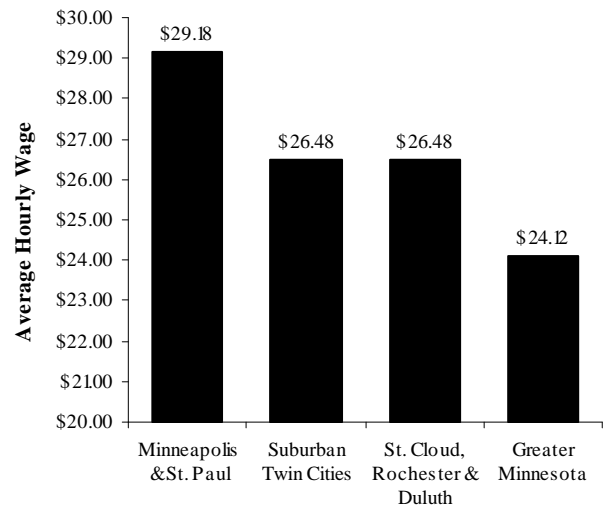
### *How long do RNs stay with an employer?*

One basic measure that the survey sought to establish is job tenure. The number of years that workers remained with an employer provides an important indicator of whether a shortage of workers exists in an occupation. Typically, a shortage occupation is one where the workforce is “churning” — i.e., workers are leaving their employer to take

<sup>7</sup> Discrete job titles were recoded with assistance from nursing experts to facilitate the analysis. See Appendix A for more information.

<sup>8</sup> This average hourly wage is almost two dollars higher than the 2002 estimate produced by the Minnesota Department of Economic Security (MDES). The difference in wage estimates is likely due to the fact that the MDES does not include the wages of higher level positions (e.g., nurse executive) in their calculation of RN wages.

**Figure 5: Average Hourly Wage by Employer Location (Primary Worksite)**



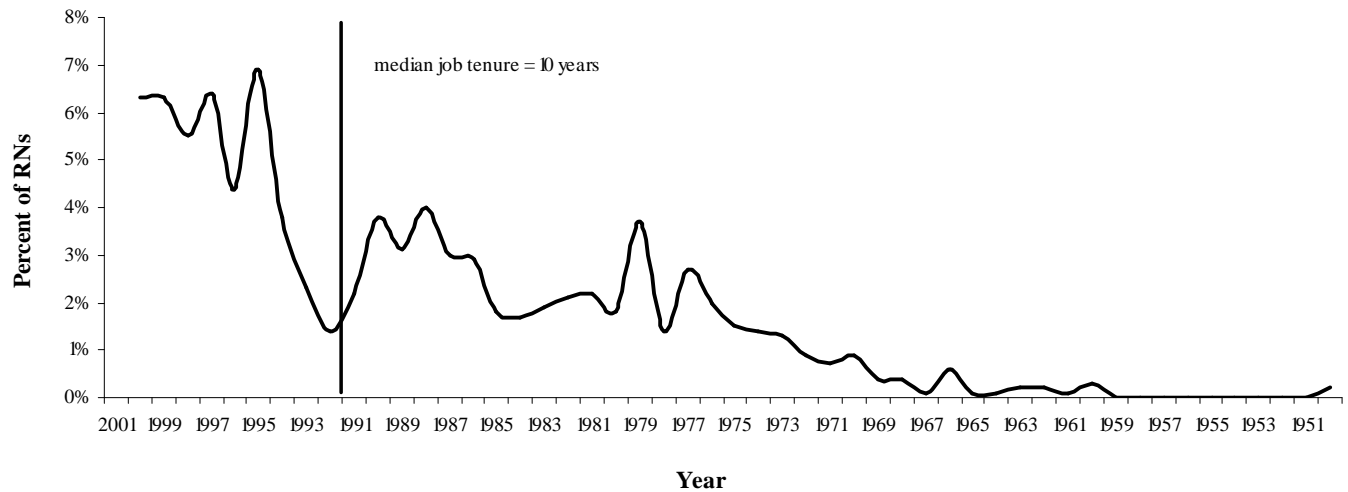
Source: *Minnesota Registered Nurse Workforce Survey*, Office of Rural Health and Primary Care, MDH, 2002.

advantage of the financial incentives offered by another employer.<sup>9</sup>

Survey findings reveal that RNs had a median job tenure of ten years and average job tenure of 12 years (see figure 6 on the following page). Not all of those starting a new job in the last three years were new graduates or were younger than 35 years old. In fact, the median age of those starting new positions in the last three years was 44 years old. This finding further reinforces the view that a shortage of registered nurses is currently creating incentives and opportunities for RNs to change jobs.

<sup>9</sup> For example, one occupation with a shortage of workers in Minnesota is pharmacist. Pharmacists had median job tenure of three years in 2001. This includes pharmacists who are new to the labor market and those who have worked in the profession for many years. *Pharmacist Workforce Profile*, Office of Rural Health and Primary Care, Minnesota Department of Health, October 2001.

**Figure 6: Employment Start Date with Current Employer**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

Where did those RNs who have changed jobs in the last four years work in 2002? Sixty percent worked in Minneapolis and St. Paul or the suburban Twin Cities. Another 26 percent worked in Greater Minnesota, and ten percent worked in Duluth, St. Cloud or Rochester. Regionally, growth patterns suggest that proportionally more RNs have started jobs in the suburban Twin Cities in the last three years compared to all other regions of the state. Thirty percent of RNs reported working for a new employer located in the suburban Twin Cities, while 22 percent of all RNs reported working in the suburban Twin Cities. This finding is similar to recent demographic data that illuminated the above average growth in the suburban Twin Cities population during the past decade. Of those who changed jobs, ten percent did not report a previous nursing employment site and were likely new workforce entrants. In Duluth, St. Cloud and Rochester areas, job changers were more likely to come from outside the area.

## Future Plans

The plans of RNs are very important to consider when contemplating the future shape of the nursing workforce. What RNs plan to do in the future, especially those who propose to leave the profession, will have an important impact on the demand for and supply of workers.

The survey asked RNs three future-oriented questions:

- Do you plan to pursue additional training in nursing within the next two years?
- Do you plan to change practice locations in the next two years?
- Do you plan on leaving the nursing profession for any reason within the next two years?

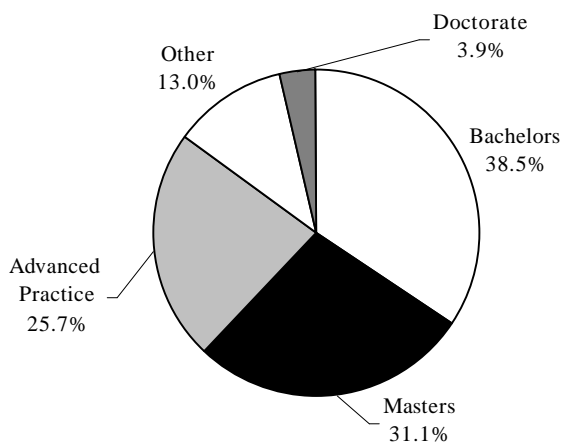
### Future Training Plans

Almost one-quarter of RNs reported planning to pursue additional nursing education within the next two years. Of these, most RNs (39 percent) planned to pursue nursing education at the baccalaureate level (see figure 7 on the following page). Of those planning to pursue a bachelor's degree, 70 percent currently had an associate's degree and 30 percent had a nursing diploma. The second largest education degree identified was a master's degree — 30 percent indicated that they planned to pursue a master's degree in nursing in the next two years. In the third largest category were RNs who were looking at advanced practice education.

### Future Practice Plans

One out of every seven Minnesota RNs with an active license planned to change his or her practice location within the next two years. One-quarter

**Figure 7: Education Goals of RNs Planning To Pursue Additional Nursing Training in the Next Two Years**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

identified an “other” facility or were undecided about the type of facility where they would work. For those that did identify a facility type, the most popular choice was a hospital inpatient facility (23 percent), followed by a clinic or provider’s office (17 percent).

The majority (60 percent) planned to stay in the region where they are currently employed. This finding is similar to the proportion of RNs who changed employers in the last three years but stayed in the same region. Of those that planned to change practice locations, most (45 percent) indicated that their preferred practice location was outside of Minnesota. Another 40 percent indicated that their new practice location would likely be in the Twin Cities region. Half of the RNs who planned to move to a new practice location in the next two years reported that their primary employment was in a hospital inpatient facility.

### Future Professional Plans

Determining the future professional plans of RNs is an important factor in determining the number of registered nurses that will be needed in the future. The reasons RNs choose to leave nursing also provide a key insight into the state of the profession.

### How many RNs plan to leave the profession in the next two years? How many RNs will the state need in the future?

An estimated fifteen percent of active RNs planned to leave nursing in the next two years. Using the most recent employment estimate for the state’s licensed RN workforce (54,920<sup>10</sup>), this finding translates into an estimate of approximately 8,000 RNs who plan to leave the profession in the next two years. To place this estimate in context, between 1996 and 2000 an estimated 3,000 new RN licenses were issued annually, mostly to individuals educated outside of Minnesota.<sup>11</sup> Using the two estimates suggests that there may be a gap between supply and demand of approximately 2,000 RNs by the end of 2003.<sup>12</sup>

This gap in the RN workforce stands in stark contrast to one estimate in a recent study of the RN shortage by the National Center for Health Workforce Analysis at the U.S. Department of Health and Human Services.<sup>13</sup> That study estimated an excess in the supply of RNs for Minnesota in 2005 of approximately 1,900 full time equivalents (FTEs). While the conflicting estimates are likely due to methodological differences between the two studies<sup>14</sup>, it is important to remember that projecting future RN employment needs is based on several

<sup>10</sup> *The National Sample Survey of Registered Nurses: March 2000, Preliminary Findings*, Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services, February 2001.

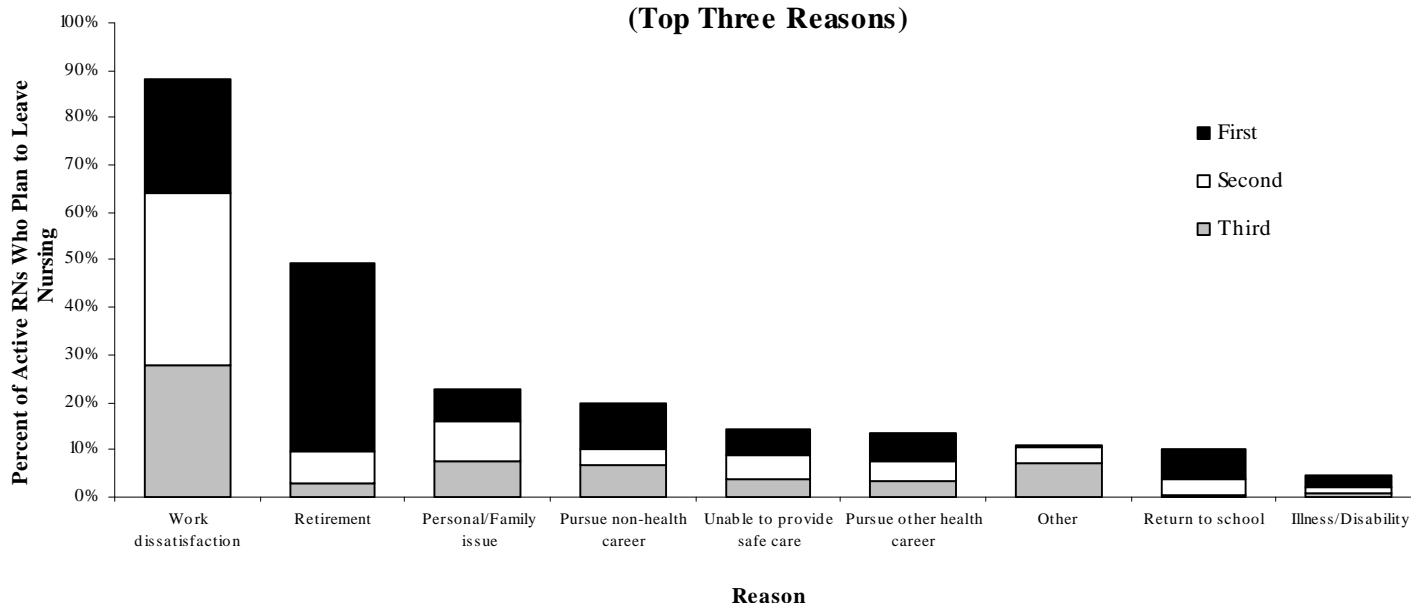
<sup>11</sup> Estimate based on a calculation of license expiration using registered nurse license data from the Minnesota State Board of Nursing. This estimate does not include data from 2001 when the number of the new licenses to out-of-state RNs increased artificially due to the nursing strike.

<sup>12</sup> Determining the state’s long term need for RN’s is even more complicated, as employment projections are notoriously difficult to calculate since a multitude of factors can impact the growth and/or decline in occupational employment.

<sup>13</sup> *Projected Supply, Demand, and Shortages of Registered Nurses: 2000-2020*, National Center for Health Workforce Analysis, Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services, July 2002.

<sup>14</sup> The Center’s study indicates that the factors used in the study may underestimate the supply of and demand for RNs in states with larger rural and aging populations and higher utilization of RNs. *Ibid.*, 13.

**Figure 8: Reason for Leaving the Nursing Profession  
(Top Three Reasons)**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

assumptions. For example, the estimate produced from the survey findings assumes that those planning to leave the profession actually leave nursing, the number of new licensees remains constant, and those who are newly licensed actually enter the state’s RN workforce. Clearly, more work on refining estimates of future supply and demand is needed. In the meantime, the survey can at least help to identify why so many RNs plan to leave the profession.

Why are nurses leaving the profession? The survey asked RNs who plan to leave the profession in the next two years to indicate their top three reasons (from a list of 13) for leaving. When all choices (first, second and third) are combined, “work dissatisfaction” was the most frequent response — almost 90 percent of RNs chose it as one of their top three reasons (see figure 8). This general category includes dissatisfaction with work arrangements, pay, workload, working conditions and management. Of these responses, RN dissatisfaction with hours and duties (workload) was the most popular response (32 percent of all those who identified work dissatisfaction as one of their top three reasons).

Forty percent of respondents reported that their lone top reason for leaving is retirement. Those who cited retirement as their first choice often ranked personal and family reasons as their second choice.

The second most frequent first choice response (24 percent) was some type of work dissatisfaction.

## Job Satisfaction

Job satisfaction questions also figured prominently in the design of the survey. The survey included 45 questions that were based largely on the nationally recognized Index of Work Satisfaction.<sup>15</sup> Since the IWS questionnaire was designed principally for RNs who are working in a patient-care setting, the survey instructed respondents to fill out that section only if they met that requirement. Eighty-five percent of survey respondents filled out the job satisfaction section of the survey. See Appendix A for more information on this section of the survey.

The 45 questions fit within six broad categories, including:

- Nursing supervision
- Image of nursing
- Wages

<sup>15</sup> The IWS questionnaire was developed by researcher Paula Stamps who currently is a member of the faculty of the School of Public Health and Health Sciences at the University of Massachusetts at Amherst. In November 2001, the Minnesota Department of Health requested approval from Professor Stamps to use the IWS questionnaire in this study’s survey instrument. Approval was granted in December of 2001.

- Work activity and setting
- Patient care
- Professional relationships

**Are RNs satisfied with their wages and their caregiving roles in the delivery of health care services?**

The narrative and graphs below provide a statewide overview of the findings from the job satisfaction portion of the survey.<sup>16</sup> The principal aim of this section is not to contrast the survey findings on job satisfaction with those of other health care and non-health care occupations. As one prominent study maintained, nurses' job satisfaction is notable "because of the potential impact of large numbers of dissatisfied and emotionally exhausted nurses on quality of patient care and patient outcomes."<sup>17</sup> Indeed recent research has established a link between high patient-to-nurse ratios at hospitals and increased job dissatisfaction and burnout. This research has also established a strong relationship between high hospital patient-to-nurse staffing ratios and increased rates of risk adjusted 30-day mortality and failure-to-rescue rates for surgical patients.<sup>18</sup>

With regard to national estimates of nurse job satisfaction, one recent study of registered nurses in Pennsylvania found that "40 percent of nurses working in hospitals reported being dissatisfied with their job."<sup>19</sup> Using results from a national survey to determine the rate for the entire population, the study estimated that Pennsylvania nurses were "three to four times more likely than the average U.S. worker to be unhappy with their position" as only 15 percent of U.S. workers reported dissatisfaction.<sup>20</sup> Since some level of work dissatisfaction is a reason why an estimated 8,000 Minnesota RNs plan to leave the profession in the next two years, attention

<sup>16</sup> In order to more easily illustrate the contrasts between those who agree and disagree with a statement, the three categories that delineate agreement (strongly agree, agree and somewhat agree) were combined into one category. A similar procedure was used for the three levels of disagreement.

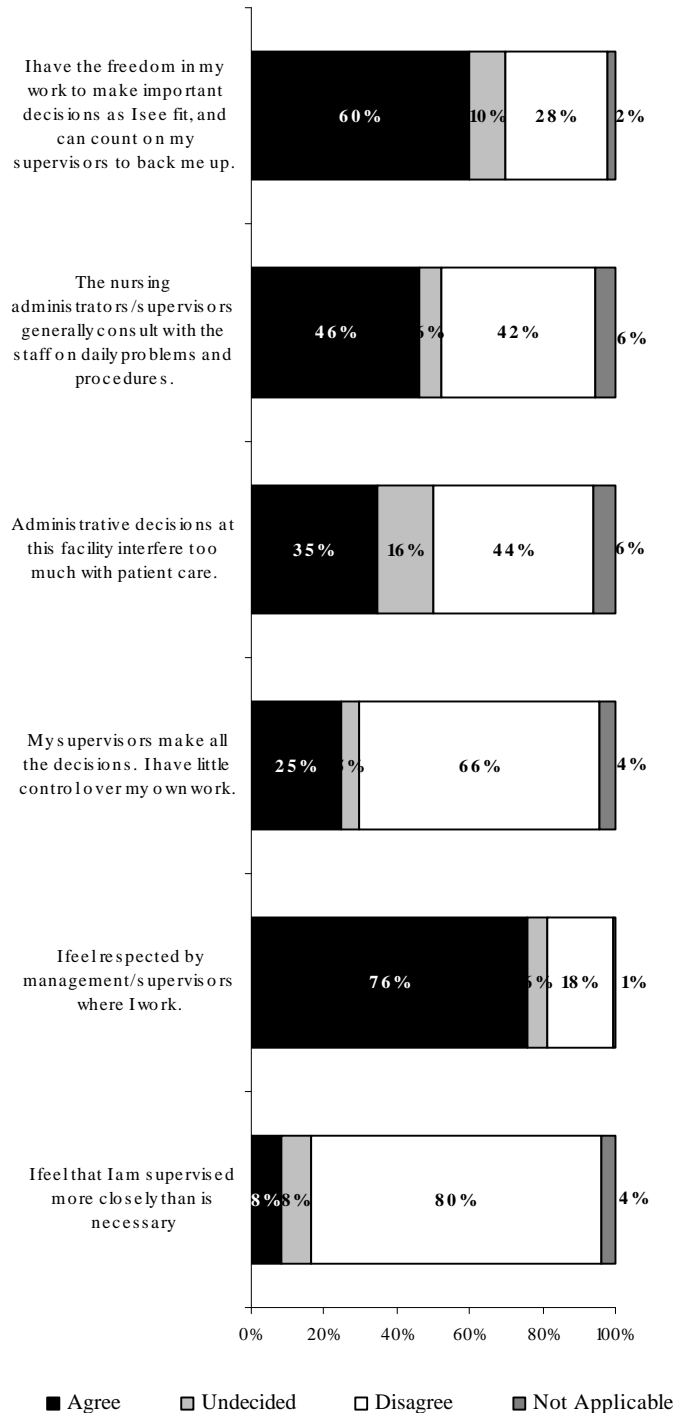
<sup>17</sup> Linda Aikin, et. al., *Nurses' Report on Hospital Care in Five Countries*, Health Affairs, May/June 2001, 45.

<sup>18</sup> Linda Aiken, et. al., *Hospital Nurse Staffing and Patient Mortality, Nurse Burnout and Job Satisfaction*, Journal of the American Medical Association, October 23/20 2002, 1990-1991.

<sup>19</sup> Linda Aikin, et. al., *Nurses' Report on Hospital Care in Five Countries*, 46.

<sup>20</sup> *Ibid.*

**Figure 9: Satisfaction Statements Related to Supervision**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

needs to be directed toward addressing issues of job satisfaction.

### Nursing Supervision

Many RNs provide patient care under the supervision of a nurse manager or supervisor, administrator, or other health care practitioner such as a physician. Through six questions, the survey sought to gauge the relationship between RNs and those who supervise them. Do RNs feel too closely supervised? Do RNs feel free to make decisions in the workplace?

Survey findings reveal mixed results with regard to the role that supervision plays for RNs in the workplace. Most RNs felt that they are respected by management and supervisors where they work (76 percent) and did not believe that they are too closely supervised in the workplace (80 percent) (see figure 9 on the previous page).

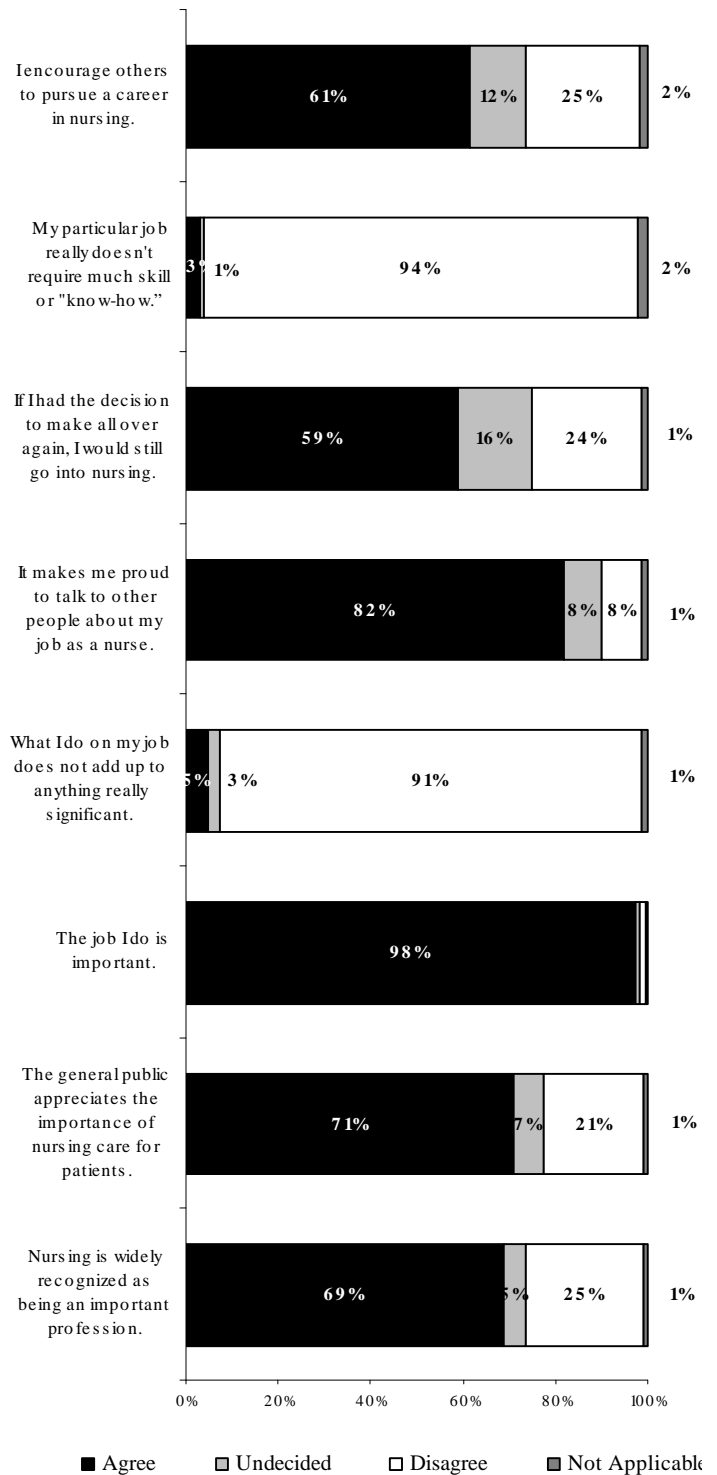
While the majority of RNs had little difficulty with supervision, for a sizeable portion of this workforce their relationship with supervisors is less than ideal. For example, 42 percent of RNs believed that administrators and supervisors do not generally consult with nursing staff on daily problems and procedures. In addition, close to one-third of RNs felt that administrative decision making at their facility interfered too much with their ability to care for patients.

In addition, close to one-third of the registered nurse workforce believed that they do not have the freedom to make an important decision that will be backed up by their supervisor. Another twenty-five percent agreed with the statement that supervisors make all of the decisions, and that RNs had little control over their own work.

### Image of Nursing

The issue of how RNs view their role in the delivery of health care and their profession was addressed. RNs viewed themselves as highly skilled workers (see figure 10), and almost all RNs who provided direct patient care agreed that the work they do is important (98 percent). And almost all (94 percent) respondents disagreed with the statement: “My particular job really doesn’t require much skill or know-how.” The vast majority of nurses (82 percent) were proud to talk to others about the job they do in the delivery of care.

**Figure 10: Satisfaction Statements Related to Nursing Image**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

When asked about how others view the nursing profession, the answers to other questions were expressed with less confidence. For example, seven out of every ten RNs believed that the general public appreciates the importance of nursing care for patients. An equivalent proportion felt that nursing is widely recognized as an important profession.

Two additional statements indicated lower RN satisfaction. The first asked whether nurses would encourage others to pursue nursing as a career. Six out of ten RNs responded affirmatively. By contrast, almost 40 percent indicated that they were undecided or would not encourage others to pursue nursing. This finding is important, especially given the current shortage of RNs and the future need for more nursing recruits. It also leads to the question: Are dissatisfied RNs discouraging others from pursuing a career in nursing? Anecdotal evidence does suggest that dissatisfied RNs are discouraging others from pursuing a career in nursing. However, it is unclear whether this phenomenon is widespread or has a major impact on the nursing profession.

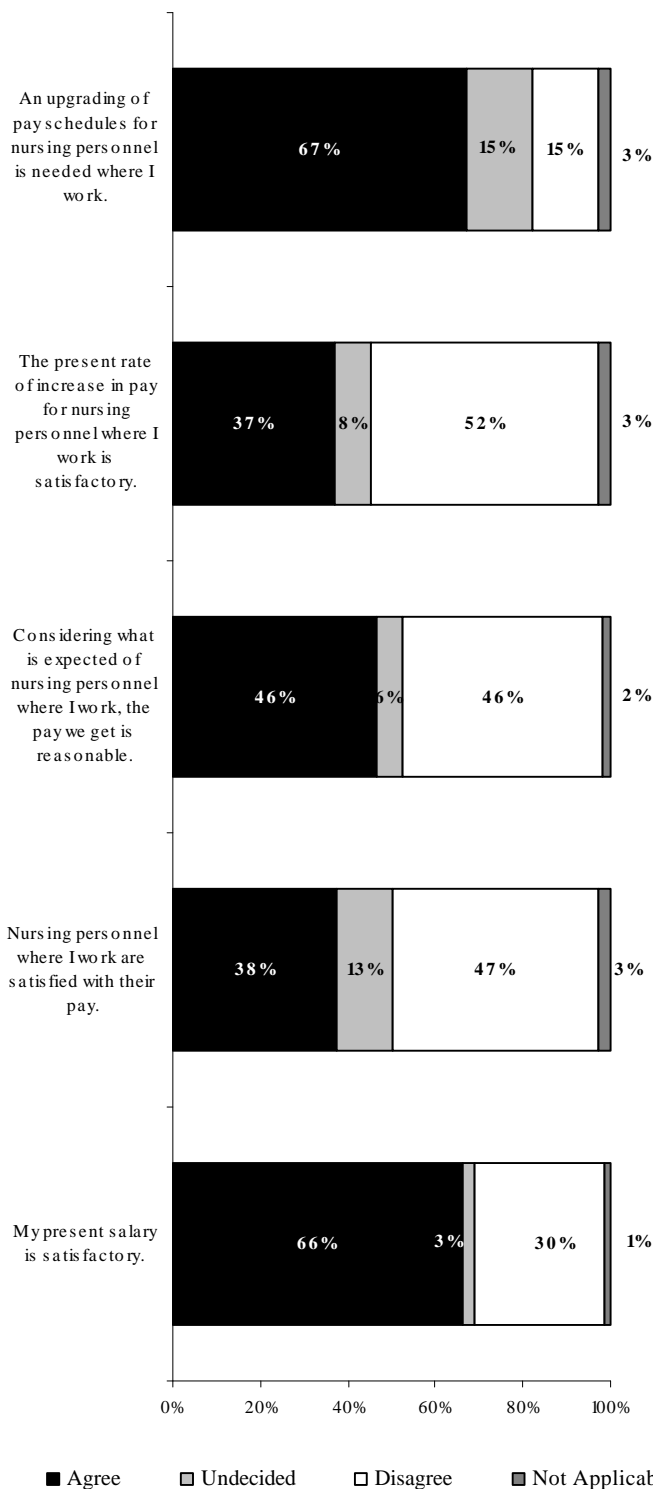
If they had to do it all over again, would the current RN workforce still go into nursing? Six out of every ten RNs responded that they would not have changed their career path. Of the remaining 40 percent of the direct patient-care workforce, most (24 percent) indicated that they would not choose nursing again, and 16 percent were undecided.

### Wages

During the Twin Cities nursing strike of 2001 wages were often cited by the media as the most contentious issue for both sides in the bargaining process. Unfortunately, no pre-strike data on wage satisfaction exists to see if the contracts that were bargained truly satisfied those RNs. The survey asked respondents to reply to five statements regarding wage satisfaction (see figure 11).

While RNs generally felt that their personal level of pay was satisfactory (66 percent), the majority felt that they and their nursing colleagues remain underpaid for the work they do. For example, almost half of all RNs felt that nursing personnel where they work were not satisfied with their pay, and that an upgrading of pay schedules (67 percent) was needed. Opinions were equally mixed with regard to the rate of pay increase, as more than half of RNs felt that increases in the rate of pay were not satisfactory. When asked if they felt that they were

**Figure 11: Satisfaction Statements Related to Wages**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.



appropriately compensated for the work expected of them, the findings reveal an equal split — 46 percent equally agreed and disagreed with that statement.

### Work Activity and Setting

The general outline of an RN’s daily work schedule (work activity and setting) provides an important context for understanding job satisfaction. The survey asked respondents to evaluate ten statements about their daily work schedules, responsibilities, and roles in the delivery of care (see figure 12).

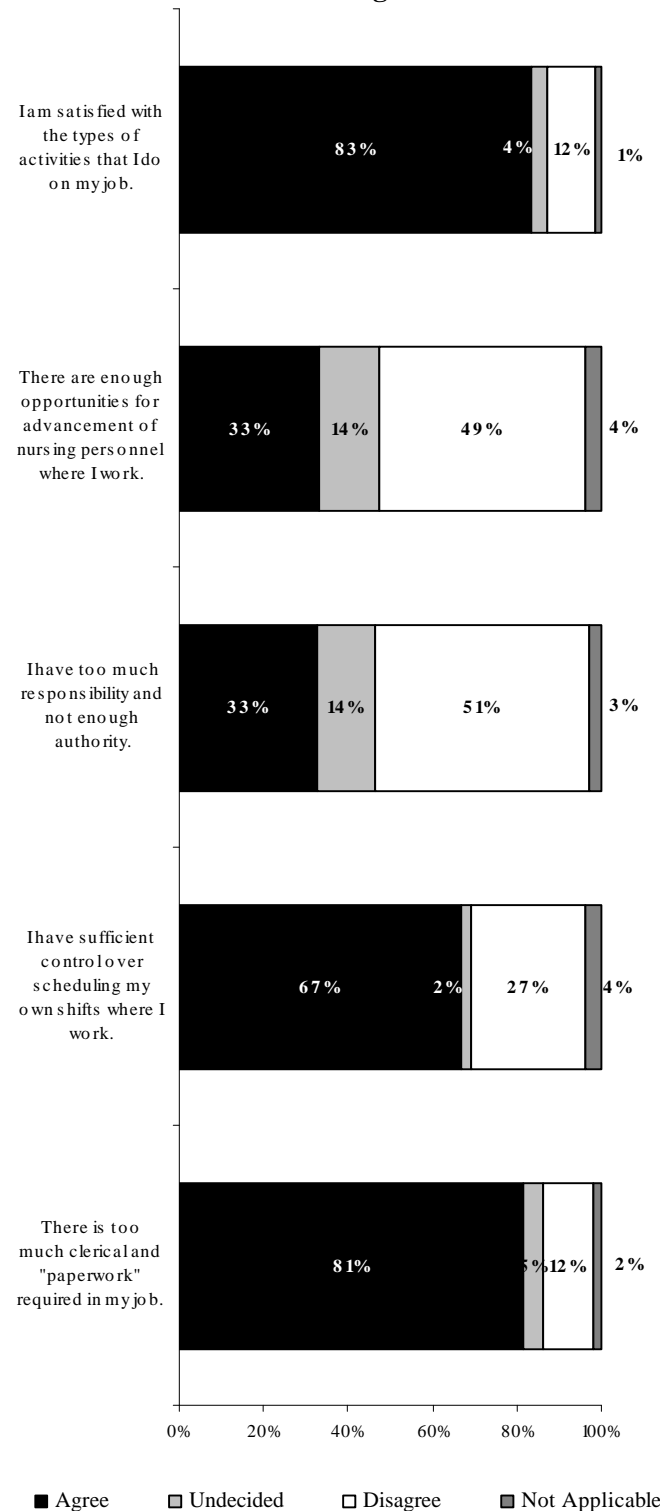
Most RNs (83 percent) were satisfied with the types of activities they perform on their job and their ability to control their own work scheduling (67 percent). Still, other facets of their work remain less than satisfying. For example, eight of every ten RNs felt that there is too much clerical and “paperwork” required in their job.

With regard to opportunities for advancement with their current employer, over half of all RNs felt that there are not enough opportunities for advancement. Only one-third believed that there were enough advancement opportunities with their current employer.

Survey findings also show a mixed response regarding how RNs felt about their autonomy and inclusion in the decision making process at their workplace (see figure 13 on the following page). RNs overwhelmingly (83 percent) believed that they had a great deal of independence where they work, and that their nursing activities were not programmed for them (60 percent). Most (70 percent) respondents also felt that they were not required to do work that goes against their better professional judgment.

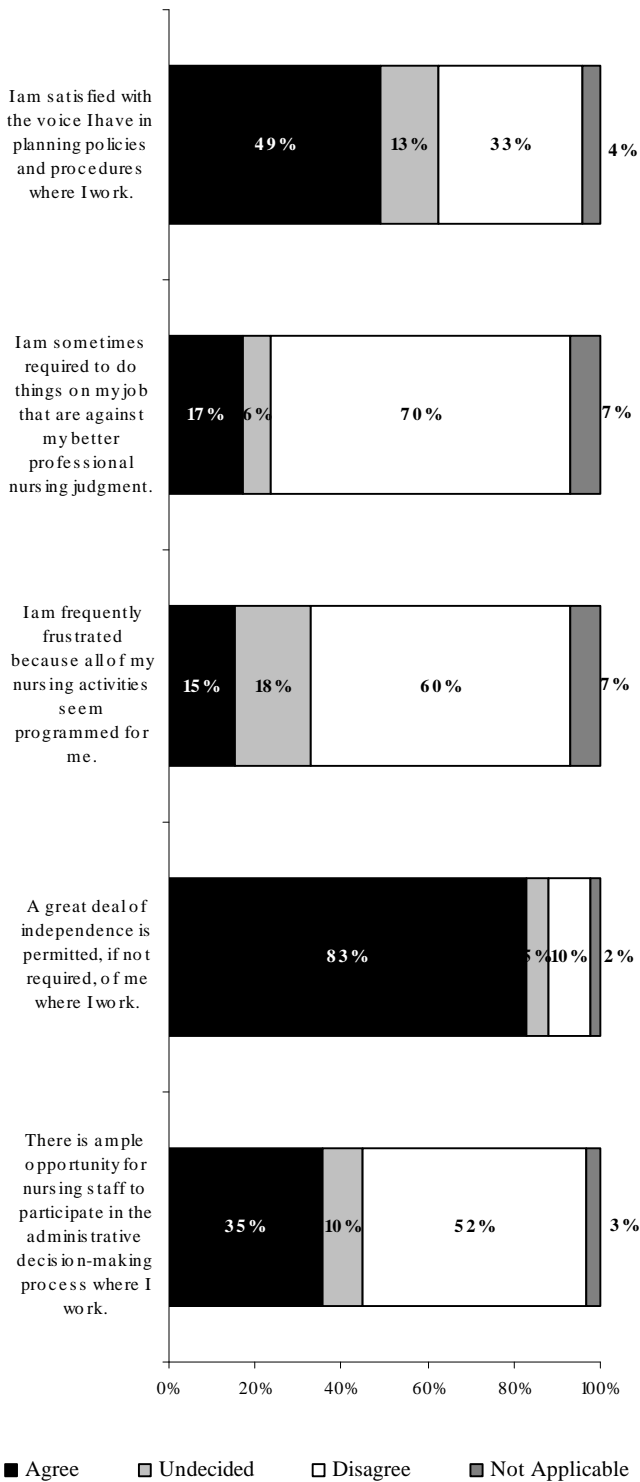
The answers varied more when RNs were asked to weigh their agreement or disagreement with the following: “I have too much responsibility and not enough authority.” Most RNs (51 percent) agreed with the statement. Still, a large proportion were either undecided (14 percent) or disagreed (33 percent) with the statement. In addition, slightly over half of RNs in direct patient care felt that ample opportunities for nursing staff to participate in the administrative decision-making process do not exist with their current employer. And only half of all RNs were satisfied with the voice they had in planning policies and procedures where they work.

**Figure 12: Satisfaction Statements Related to Job Activities and Work Setting**



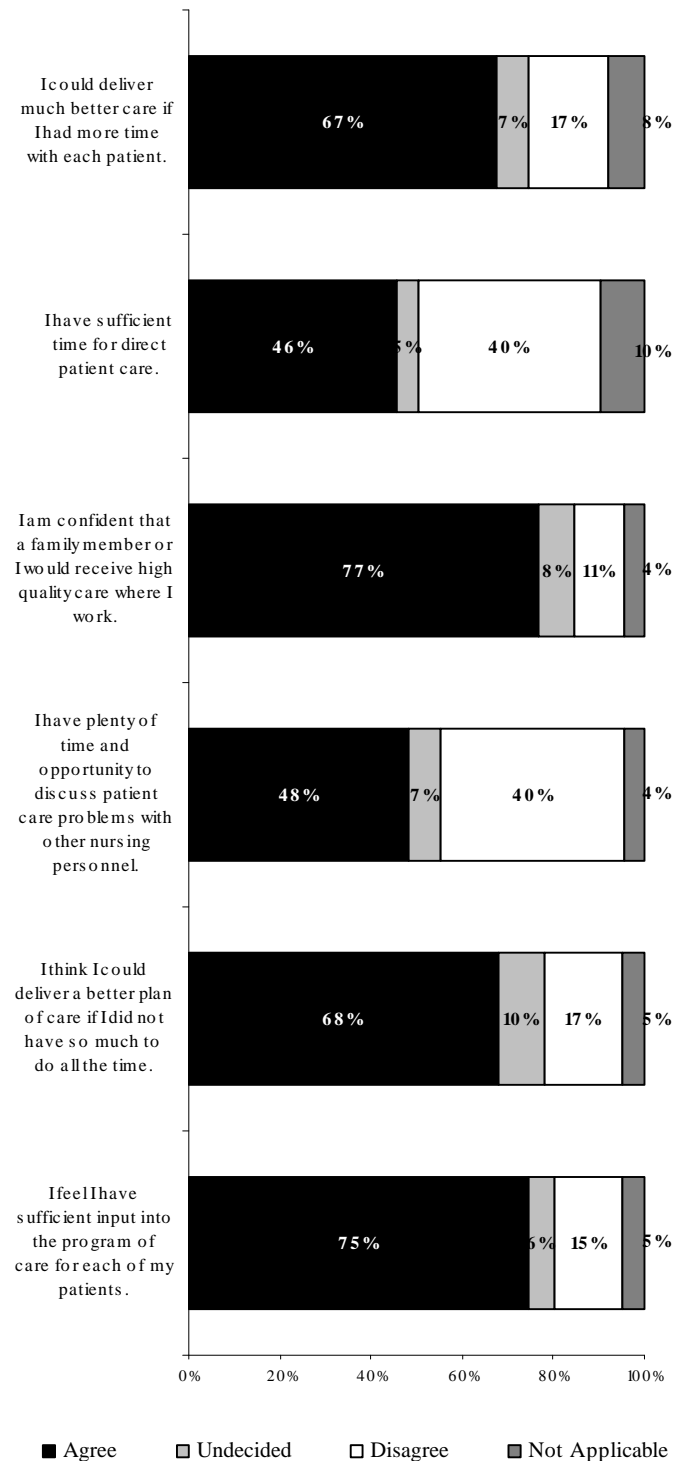
Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

**Figure 13: Satisfaction Statements Related to Job Activities and Work Setting**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

**Figure 14: Satisfaction Statements Related to Patient Care**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

**Patient Care**

RNs were asked to respond to statements focused on their ability to provide and plan care for patients. Once again, the findings from the survey are mixed.

On one hand, most RNs (75 percent) felt that they had sufficient input into the program of care for each patient (see figure 14 on the previous page). Almost eight out of every ten RNs also believed that they or a family member would receive high quality care where they work. On the other hand, only 46 percent of RNs felt they had sufficient time for direct patient care. An equal percentage of respondents were undecided or disagreed with that statement.

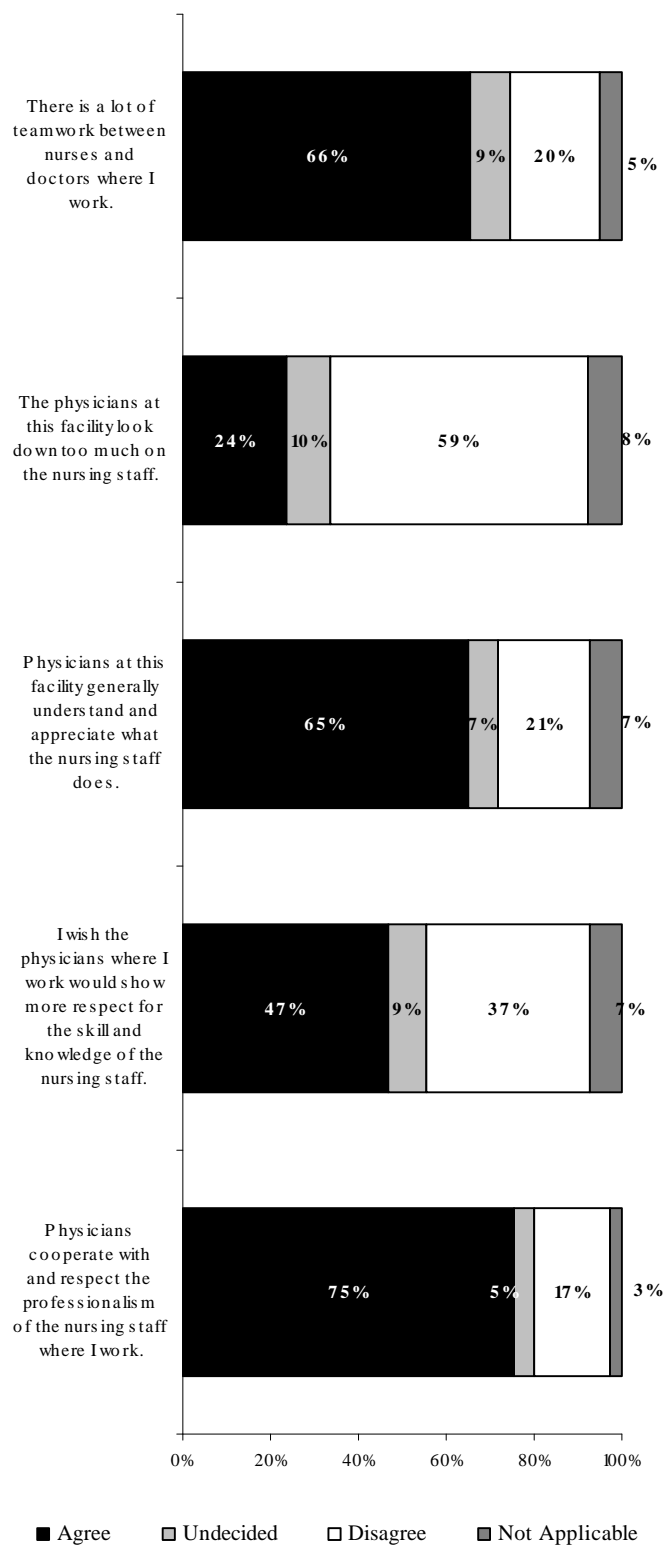
Overall, the response to other statements suggests that many RNs felt that barriers exist that hinder their ability to move beyond providing adequate care to providing superior care for patients. For example, almost seven out of every ten RNs agreed with the following statement: “I could deliver much better care if I had more time with each patient.” That statement is further affirmed by a similar percentage (68 percent) of RNs who agreed with the statement that they could deliver a better care plan if they didn’t have so much to do all the time. The time to deliver better care is also a factor when it comes to an RN’s ability to discuss problems with other nursing personnel. Approximately 50 percent of nurses believed that they have enough time to discuss patient care with other nursing personnel, while 40 percent did not and ten percent were undecided.

**Professional relationships**

RNs are an important member of a team of professionals who provide care. In addition to their relationships with supervisors (see previous section on supervision), RNs were asked to agree or disagree with statements concerning their relationships with physicians, other nursing personnel, and other health care workers.

With regard to their work with physicians, 75 percent of RNs felt that physicians cooperate with and respect the professionalism of the nursing staff where they work (see figure 15). Two-thirds of RNs also believed that there is a lot of teamwork between them and the physicians at their workplace, and that physicians generally understood the work of the nursing staff. The teamwork and understanding that is seen by most RNs did not correspond

**Figure 15: Satisfaction Statements Related to Professional Relationships**



Source: Minnesota Registered Nurse Workforce Survey, Office of Rural Health and Primary Care, MDH, 2002.

uniformly to “respect for professional skills.” In fact, almost half of all RNs wished that the physicians where they work would show more respect for the staff’s nursing skill and knowledge.

RNs generally believed that their relationship with their fellow nursing personnel is good (see figure 16). For example, approximately three-quarters of RNs felt that there is a good deal of cooperation between various levels of nursing personnel where they work. The vast majority of nurses (85 percent) also believed that personnel pitch in and help one another during busy periods.

Where nursing relationships seemed to break down is between new and old staff. Anecdotal evidence has suggested that new RNs may get assigned to the least desirable shifts or have greater difficulty making the transition from an educational environment to clinical practice. This was supported by survey findings which reveal that slightly over one-third of RNs felt that new nurses had a harder time feeling “at home” in the unit where they work.

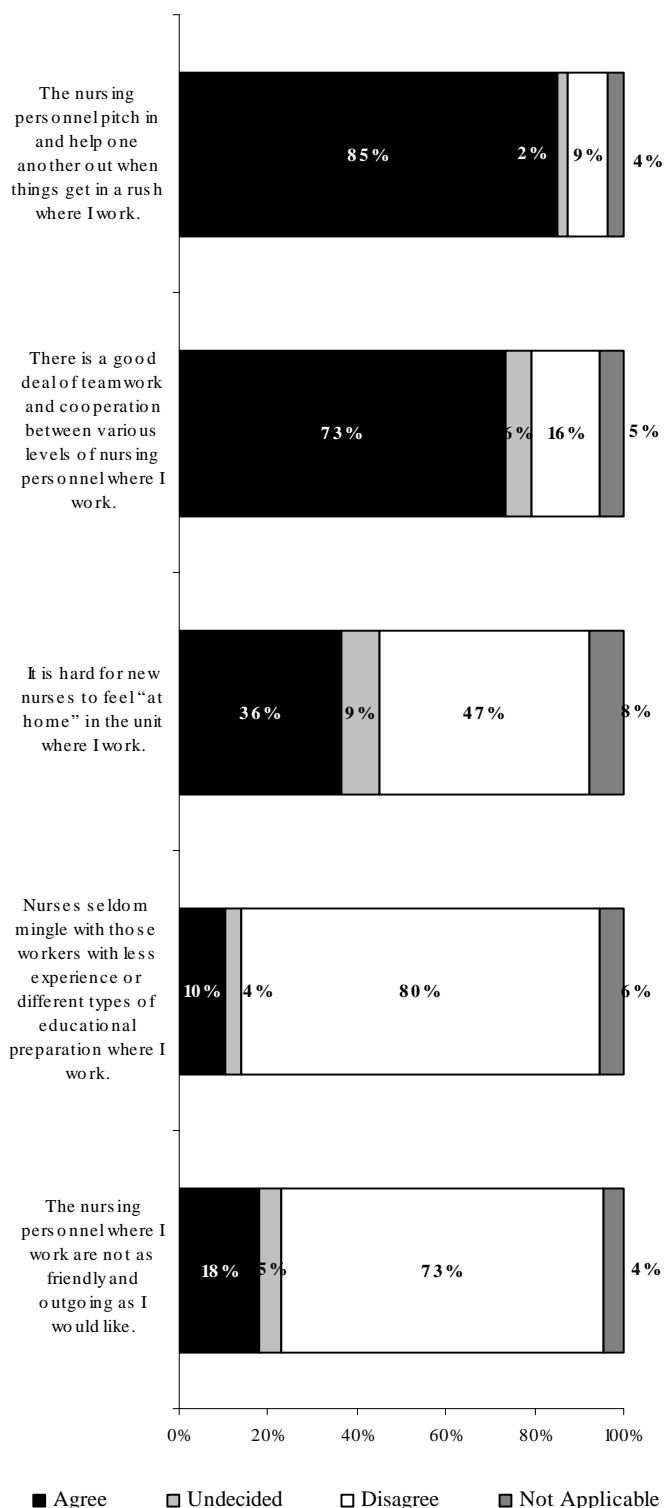
## Summary and Conclusion

The current shortage of registered nurses is projected to worsen in the coming years due primarily to an aging RN workforce, increased demand for health services by an aging population and the less than adequate number of nurses graduating from schools within the state and the rest of the country.

The *Minnesota Registered Nurse Workforce Survey* was conducted in order to gain reliable and statistically valid information that could be used by policy makers and workforce planners to address the current shortage of RNs. Since this survey was designed to gather information on the “supply-side” of the RN workforce equation, potential “demand-side” remedies will not be discussed here.

The survey reveals two significant findings that relate to the supply of RNs in Minnesota. First, while efforts to expand nursing capacity in the state would have an important impact on the supply of RNs, findings from the survey strongly suggest that such efforts could be ineffective if an overwhelming number of nurses leave the profession — an estimated 15 percent of RNs plan to leave the profession in the next two years. Based on this single finding alone, public and private efforts that are focused on retaining qualified nurses are needed

**Figure 16: Satisfaction Statements Related to Professional Relationships**



Source: *Minnesota Registered Nurse Workforce Survey*, Office of Rural Health and Primary Care, MDH, 2002.

to reduce the impact of the shortage on the quality of patient care that is delivered.

This is not to suggest that expanding nursing capacity is not important. Increasing the supply of RNs in the long-term is needed and will require an expansion in the capacity of the state's post-secondary institutions to produce new and retrain inactive RNs. However, survey findings suggest that expanding nursing capacity should be done with careful consideration for the ebb and flow of RN workforce within the state. Therefore, policymakers may want to consider additional financial incentives, such as scholarships and loan forgiveness, which help to target nursing graduates to areas with the greatest need.

Second, survey findings reveal that work dissatisfaction played a significant role in why 8,000 RNs plan to leave the profession in the next two years. Is there a remedy for work dissatisfaction among RNs? One proven method for improving RN job satisfaction has come through the Magnet Nursing Services Recognition Program for Excellence in Nursing Service developed by the American Nurses Credentialing Center in 1994. Magnet status is awarded to those health care organizations that provide high quality nursing care and support professional nursing practice. Studies of magnet-designated hospitals found that these facilities enjoy higher levels of "RN job satisfaction and lower levels of burnout and job-related stress when compared to other like non-magnet facilities."<sup>21</sup> At present, only the Mayo Clinic has received magnet designation in Minnesota. While organizational and financial barriers to formal magnet recognition exist, health care providers that pursue "magnet qualities" without the formal designation would likely also enjoy the same benefits.

In conclusion, a stable RN workforce in Minnesota is critical to the current and future delivery of quality patient care. The fact that a large majority of RNs surveyed identified the desire "to comfort and care for others" as the main reason they entered the profession must be kept at the center of any further efforts to recruit and retain nurses.

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<sup>21</sup> *Magnet Hospitals: A Positive Approach to Minnesota's Nursing Shortage*, Office of Rural Health and Primary Care, Minnesota Department of Health, December 2001.

# Appendix A: Survey Methodology, Response Rates, Data Modifications and Weighting

## Survey Methodology

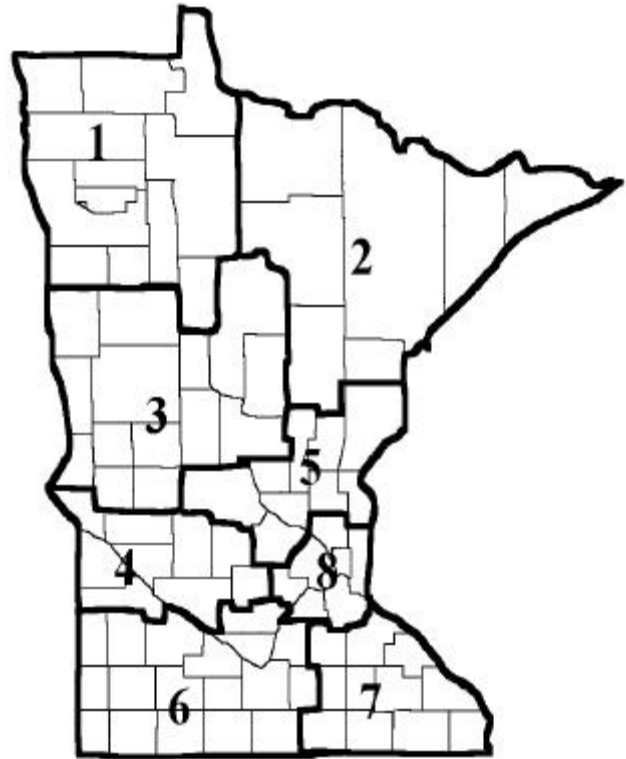
The *Minnesota Registered Nurse Workforce Survey* was a random stratified mail-response sample survey. The data were collected through one full survey mailing and one follow-up letter through the Office of Rural Health and Primary Care at the Minnesota Department of Health between January 2002 and April 2002.

In May 2001, the ORHPC convened an advisory committee composed of nursing workforce experts to make recommendations on the scope of the survey instrument. Nursing workforce experts attending this meeting included:

- Elizabeth Biel, Minnesota Hospital & Healthcare Partnership
- Shirley Brekken, Minnesota Board of Nursing
- Estelle Brouwer, Minnesota Department of Health
- Carol Diemert, Minnesota Nurses Association
- Joanne Disch, University of Minnesota
- Michael Grover, Minnesota Department of Health
- Ann Jones, Bethel College
- Kristin Juliar, Healthcare Education Industry Partnership
- Marie Margitan, Minnesota Department of Health
- Diane Rydrych, Minnesota Department of Health
- Sheryl Meyer, Minnesota Board of Nursing
- Lori Steffen, Colleagues in Caring
- Jennifer Stumpf, University of Minnesota

Based on that meeting and follow-up discussion with individuals, it was decided that the objective of the survey would be to gather a wide range of workforce related information from a sample of the state's incumbent Registered Nurse Workforce at a regional level. At its core, the survey seeks to establish benchmarks regarding registered nurse job

Map A-1: Survey Regions



satisfaction, employment patterns and demographics. The survey contained seven sections: Demographic Background, Education and Licensure, Current Employment, Previous Nursing Employment, Future Plans, Job Satisfaction and Additional Comments.

In order to gather regional information, the sampling strategy was specifically designed to gather enough completed surveys in each of eight regions of the state to make reliable statistical estimates. The eight regions selected correspond directly or by aggregation to the state's fourteen economic development regions (see map A-1).

The registered nurses surveyed were randomly selected from the Minnesota Health Workforce Database administered through the Office of Rural Health and Primary Care. Employment and training data found in the database is collected every two years through a survey of registered nurses at the time of relicensing by the Minnesota State Board of Nursing. Over 40,000 registered nurses (roughly 68 percent of those eligible for relicensure) responded to the survey during the 1998-2000 period.

Using this population, those nurses who indicated that they actively use their license were selected and grouped into regions based on their primary practice site. A stratified sample was drawn based on these regional primary practice employment totals. Surveys were mailed to the nurses using the public address listed by the Minnesota State Board of Nursing in January of 2002. Only one follow-up letter, which encouraged non-respondents to complete and mail their survey, was sent in February.

In order to guarantee the privacy of the individual each survey returned to ORHPC did not list a survey number. Survey numbers did appear on the return envelope and were used to track responses. Upon receipt, the envelope and survey were separated and stored in separate locations. Due to a small registered nursing population in several of the state's economic development regions, six regions were combined into three regions to further enhance the privacy of individuals and validity of the survey.

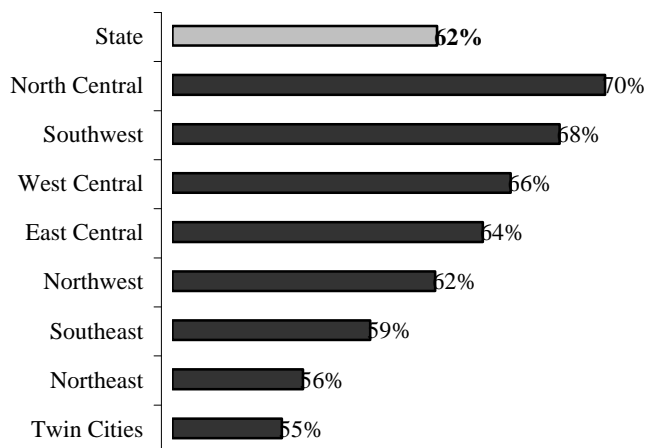
## Response Rates

A total of 2,274 completed surveys were received for a response rate of 62.4 percent. Response rates varied at the regional level. Five of the regions selected had response rates that were higher than the state average. Three regions, including the Twin Cities, the Southeast and Northeast had lower than average rates (see figure A-1).

RNs were asked to give an honest opinion regarding the statements about current job satisfaction. In doing so, they ranked their agreement with each statement on a scale from one to seven, with one representing strong agreement with the statement and seven representing strong disagreement. The questions covered a wide range of topics, including wages, care delivery supervision, relationships with other health professionals, and the importance of nursing as a career. Questions for some topics were asked in several different ways. For example, there are five statements that deal with RN satisfaction with wages:

- My present salary is satisfactory.
- Nursing personnel where I work are satisfied with their pay.

Figure A-1: Survey Response Rates by Region



- Considering what is expected of nursing personnel where I work, the pay we get is reasonable.
- The present rate of increase in pay for nursing personnel where I work is satisfactory.
- An upgrading of the pay schedules for nursing personnel is needed where I work.

Each wage-related question appears in another part of the survey section and is designed to delve deeper into the topic of wages.

## Data Modifications

Several data modifications were completed to further protect the privacy of individuals and validity of the survey. In particular, the town each respondent identified for their high school education was recoded to indicate the region of Minnesota where the town is located. The high school origins of non-state high school graduates residents were coded as out-of-state. In addition, respondents provided over 1,600 discrete job titles, from Acting Nursing Manager to WIC Nurse, for their current and previous employment. With technical assistance from the nursing specialists from the Minnesota Nurses Association, these individual job titles were recoded into 11 job categories:

Case Coordinator/Manager  
 Coordinator  
 Director/Administrator/Executive  
 Educator  
 Manager/Supervisor  
 Nursing Faculty

Other – Non RN  
RN  
RN – Advanced Practice  
RN – Charge

## **Weighting of Survey Responses**

Statistical weights for the *Minnesota Registered Nurse Workforce Survey* were constructed to adjust for survey non-response and probability selection error. Statistical weights were constructed using the regional age distribution and population of actively licensed registered nurses. Statistical weights were constructed to give researchers and planners the opportunity to analyze the broad social and demographic characteristics (e.g., age, gender, and marital status) and labor market experiences (work hours, wages, and job satisfaction) of the registered nurses workforce.

Researchers and planners using the data for health workforce research should pay close attention to the likelihood of small frequencies in specific cells. Due to the survey design, which asked for an extensive amount of detailed information, idiosyncratic responses do exist in the data. For example, Sections C and D of the survey asked respondents to identify current and previous practice site information. Since the sample drawn was not representative of the department, unit or area of the larger registered nurse population, job satisfaction findings (for example) for those who work in a specific department, unit or area may not be reliable.

If you have questions regarding the use of statistical weights in the analysis of this survey data, or would like a copy of the survey instrument used in this study, please contact Michael Grover by phone at (651) 282-5642 or by email at michael.grover@state.mn.us. Copies of this report, the survey instrument and data from the survey are also available online at: [www.health.state.mn.us/divs/chs/workdata.htm](http://www.health.state.mn.us/divs/chs/workdata.htm).