

## Department of Health Professions

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### Healthcare Workforce Data Center

# The 2007 & 2008 Virginia Licensed Nursing Workforce Survey Findings and Recommendations

*For their efforts in the establishment of the Department of Health Professions Healthcare Workforce Data Center, special appreciation is extended to Governor Tim Kaine; the Governor's 2007 Health Reform Commission; Marilyn B. Tavenner, Secretary of Health and Human Resources; Sandra Whitley Ryals, Director of the Department of Health Professions; Beverly Beck, Project Manager; and to the members of the Healthcare Workforce Data Center's Advisory Council; Physician Workforce Committee; Nursing Workforce Committee; and the Healthcare Workforce Information Network Committee.*

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# The Nursing Workforce in Virginia

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## Preface

In August 2006, the Governor issued Executive Order 31 to create a Health Reform Commission charged with recommending ways to improve Virginia's healthcare system. The Commission addressed key issues relating to access to care; quality, transparency and prevention; long-term care; and healthcare workforce. In its September 2007 report, the Commission projected a shortage of approximately 22,600 nurses and 1,500 physicians in Virginia by 2020 and indicated that Virginia would be experiencing a growing need for direct support professionals, physician extenders, and other healthcare providers to address the requirements of the elderly, disabled, and others in long-term settings. They recommended the formation of the Healthcare Workforce Data Center within the Department of Health Professions (DHP). DHP was considered a natural repository of the Center because it maintains Virginia's licensure database for almost 100 health professions and approximately 350,000 practitioners. In the spring of 2008, the Governor designated Workforce Investment Act (WIA) discretionary funds for the Center's establishment, and in FY 2010, supplemental WIA funds were awarded to the Center for continued data collection and analysis activities.

The Center's mission is to:

*improve the healthcare system in the Commonwealth by improving data collection and measurement of the Commonwealth's healthcare workforce through regular assessment of workforce supply and demand.<sup>1 2</sup>*

The Center's focus for FY2009 was to define the chief nursing and physician supply and demand issues. Also during FY2009, the Center's administrative structure was established, its website was instituted, and the Healthcare Workforce Advisory Council (the "Advisory Council") and three committees were formed. The Advisory Council, comprised of approximately 20 stakeholders, included representatives from state agencies, members of the General Assembly, and constituent organizations knowledgeable about healthcare workforce issues in Virginia and nationally. Specific expertise was provided by the: (1) Physicians Workforce Committee, (2) Nursing Workforce Committee, and (3) Healthcare Workforce Information Network.

During the Center's first full year beginning in FY2010, the Department's in-house research capabilities were determined and consultant research partners selected. Data from existing licensure renewal surveys for physicians and nurses and nursing education program survey information were made available for consultant analysis and reporting. Subsequently, DHP's existing nursing and physician surveys have been revised to better ensure that the data gathered would be of most direct relevance to workforce. The new workforce surveys will become part of the on-line licensure renewals process for calendar year 2010 and 2011. Further, an initial application workforce survey for all professions has been developed and is slated to launch with the DHP new online application process.

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<sup>1</sup> Commonwealth of Virginia Health Reform Commission (2007). *Roadmap for Virginia's Health: A Report of the Governor's Health Reform Commission September 2007.*

<sup>2</sup> In the spring of 2008, Governor Timothy Kaine designated Workforce Investment Act (WIA) discretionary funds for the establishment of the Center under the direction of the DHP Director, Sandra Whitley Ryals. Supplemental WIA funds were awarded for FY2010 for continued data collection and analysis activities.

*Findings from the 2007 and 2008 Virginia Licensed Nurse Workforce Survey* is the first in a series of reports from the DHP Healthcare Workforce Data Center (the Center) designed to inform readers on the workforce status of Virginia's licensed nurses (registered nurses and licensed practical nurses). The source data were drawn from the latest licensed nurse licensure renewal survey completed in 2007 and 2008 and analyzed and reported through the support of the Center's research partners.<sup>3</sup> Future reports will be based upon the results of a revised nursing licensure renewal questionnaire specifically designed to address the issues identified by the Nursing Workforce Committee and the Advisory Council and the data needs of state agencies and others identified by the Healthcare Workforce Information Network Committee. The recommendations for modifying the 2007-2008 survey, the 2007-2008 survey instrument, and the new survey instrument for 2010-2011 are provided in the Appendix to this report.

*Note to Researchers: In addition to the information provided in the current report, the Department of Health Professions Healthcare Workforce Data Center also maintains frequency tables and cross-tabulations of the data obtained from the 2007-2008 Nursing Workforce Survey. The RN results are in the document entitled "DHP Healthcare Workforce Data Center Nursing Workforce Licensure Renewal Survey 2007-2008 Data Cube - Virginia Registered Nurse Results." and the LPN results are in the document entitled "DHP Healthcare Workforce Data Center Nursing Workforce Licensure Renewal Survey 2007-2008 Data Cube - Virginia Licensed Practical Nurse Results." Each may be accessed from:*  
[www.dhp.virginia.gov/hwdc/](http://www.dhp.virginia.gov/hwdc/).

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<sup>3</sup> The current report was prepared through the consulting aid provided by Linda Lacey, Lacey Research Associates, North Carolina under Contract HWDC-2008 and evaluative and technical assistance from the Department of Health Administration and Policy at George Mason University, Fairfax, Virginia (Dr. P. J. Maddox, Luann Wittenburg, and Adam McCutcheon) under a memorandum of understanding.

## Executive Summary

Virginia's population is projected to increase by approximately one million over the next decade and to be comprised of a larger proportion of people aged 65 and older than today. Reliable and validated healthcare workforce information is essential. The Department of Health Professions Healthcare Workforce Data Center (i.e., the Center) was established to gather and provide information designed to address key healthcare workforce issues across professions.

The current study provides initial baseline information on Virginia's nursing workforce from the results of the most recent on-line renewal survey of Virginia licensed nurses completed in 2007 and 2008.<sup>4</sup> The report additionally makes comparisons with available national data, as appropriate, and recommends improvements for future Virginia nurse workforce surveys to enable a minimal data set of topics available for tracking over time. Based upon the 2007-2008 survey, the following summarizes the chief results. The report, itself, provides much further details, with 30 tables that include the relative counts and percentages of participating LPNs and RNs according to their responses to each survey subject area.

### Employment in Nursing and Practice in Virginia

Over 70% of renewing registered nurses (RNs) and over half of renewing licensed practical nurses (LPNs) (54.5%) responded to the survey. Of these participants, more than 80% reported being employed in nursing. Of the RN participants who reported being employed in nursing, the vast majority (over 77%) reported practice location zip codes in Virginia. For the LPNs, it was even greater (79.2%).<sup>5</sup>

### Initial Licensing State

Of the responding RNs, approximately 60% obtained their initial licenses in Virginia. One-third were originally licensed in another state. For the LPNs responding to the survey, over 77% reported being originally licensed in Virginia, while only approximately 14% reported an initial license elsewhere.

### Demographics

#### Gender

Virginia's responding nurses were predominantly female. Over 91% of all reporting RNs were, while 5.6% were male. For those reporting to be employed in nursing in Virginia, the breakdown was similar, 92% female and 5.6% male. For participating LPNs, overall, 91.5% were female and 4.6% male. For LPNs reporting Virginia nursing practice locations, 93.2% were female and 4.5% male.

#### Race & Ethnicity

Over 80% of RN participants, overall, and those reporting employment in nursing in Virginia described themselves as "White, not of Hispanic origin." For LPNs this group was also the largest; however, their comparable percentages dropped to the upper 60's. "Black, not of Hispanic origin" was the next largest selected group for LPNs and RNs, overall, and those reporting to be employed in nursing in Virginia. However, for LPNs, the proportions were ranged from 23.4-24.1%, while for RNs the range was 8.0 - 8.1%, overall versus those reporting they worked in nursing in Virginia. The remaining groups each constituted less than 5% of the responses for RNs or LPNs.

<sup>4</sup> It is important to note that the 2007-08 data was collected over a two year period because licensure renewal occurs during the birth month of the nursing licensee every other year.

<sup>5</sup> To enable more accurate reporting and mapping of actual practice locations than is possible with zip code-level data, a recommended improvement for the new 2010-2011 survey is to obtain street-level practice addresses.

### Age

The age of the nursing workforce is significant especially given Baby Boomers' advancing years. The largest number of RN and LPN participants were 46-50 years old regardless of whether they were working in nursing in Virginia. The largest age group in the 2004 National Survey of Registered Nurses was also in the 45-50 age range. When comparing the overall age distribution of responding RNs and LPNs, LPNs were slightly younger than the RNs which is the reverse of the national survey results.

### **Highest Level of Education**

Almost a third of responding RNs, overall, and those working in nursing in Virginia reported baccalaureate degrees in nursing as their highest attained education. The next largest group of RNs, overall, and those working in nursing in Virginia reported having attained an associates degree in nursing. For participating LPNs the overwhelming majority reported an LPN diploma or certificate as their highest level of education: 89.9%, overall, and 90.6% of those reporting working in nursing in Virginia. The next most prevalent LPN group (less than 4% for either) reported earning a non-nursing associates degree.

### **Full-Time and Part-Time Employment**

Full-time employment was operationally defined as 32 or more hours per week. The great majority of responding RNs and LPNs who indicated that they worked in nursing in Virginia did so on a full-time basis (80.8% of RNs and 84.1%, respectively). Only 18.4% of RNs and 15.2% of LPNs reported working part-time in nursing.

### **Employment Role<sup>6</sup>**

Over 77% of RN and over 83% of LPN participants who indicated they were employed in nursing in Virginia reported that they worked in a clinical role. The next largest role for both was managerial or administrative (over 14% for RNs and over 10% for LPNs). Almost 6% of responding RNs approximately 3% of LPNs indicated they were involved in education and staff development, while approximately 2% said they were in a consultative or regulatory role.

### **Employment Setting**

Hospitals were the largest employment settings for Virginia RNs and LPNs responding to the survey. Well over half of the RN participants and a third of LPN responders said they worked in hospitals. The second largest setting for participating RNs working in nursing in Virginia was in physician offices, the third, in long-term care facilities. For LPNs, the second largest setting was long-term care followed physician offices.

### **Relationship between Role and Setting**

With the exception of insurance companies and nursing education settings, the vast majority of RNs and LPNs reported working in a clinical role across settings. Tables 15 and 16 (page 12) provide further details for both RNs and LPNs by role and employment setting.

### **Level of Job Satisfaction**

The level of job satisfaction for survey responders was high. The vast majority (over 90%) of participating RNs and LPNs who said they worked in nursing in Virginia selected "somewhat satisfied" or "very satisfied" when asked their level satisfaction in their current job. Less than 8% indicated they were "somewhat dissatisfied" or "very dissatisfied"). In all employment roles, reported satisfaction was above 90%. In all employment settings, the level of satisfaction was similarly high but did vary slightly according to specific setting. The rate of positive

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<sup>6</sup> To eliminate confusion with work location posed by the term, "Employment Environment" for the general reader, it has been replaced by the term "Employment Role."

satisfaction results ranged from a high of 95.9% for school health settings to 88.4% in mental health facilities. Those working in Virginia in hospitals reporting being satisfied constituted the largest group of responders 89.7% for RNs and 89.4% for LPNs. There was no relationship between job satisfaction and job tenure. Nurses employed just a few months were as satisfied or dissatisfied as nurses employed much longer.

### **Length of Time in Current Position**

Of the RN participants who reported they worked in nursing in Virginia, almost one third said they had held their current position for two years or less. Approximately a quarter had been in their position for three to five years and about one-fifth for five to ten years. Over one-fifth had a tenure of more than ten years. A similar profile was obtained from participating LPNs.

### **Expected Number of Future Years of Employment in Nursing**

Having an understanding of intentions of nurses who intend to continue working and for how long is key to healthcare workforce matters. The survey asked nurses to estimate how much longer they expected to work in nursing. Although there are some differences between the responses of RNs and LPNs, the profiles were very similar. Generally younger nurses reported planning to stay longer and older nurses plan to leave earlier. However, there were exceptions. For example, approximately 14% of responding RNs aged 66 to 70 reported intending to continue to work for at least another five years. For LPNs this age, approximately 41% reported intending to work for another ten years. Future trend analyses of responses to this question will help determine nurse employment participation changes over time.

### **Expected Number of Future Years of Employment in Nursing by Setting**

Of RN participants working in nursing in Virginia, 28% in public community health and school health settings indicated they plan to retire within the next five years. It was 25% for those in nursing education. With the exception of hospitals, every other setting may expect to lose about 20% of the current RN participants within the next five years. Only 17.2% of RN participants working in nursing in hospitals in Virginia reported intending to leave the workplace within five years. For LPNs,

### **RNs in Advanced Practice Roles**

As a consequence of the study's findings, a new nursing licensure renewal survey and a new initial applicant survey have been developed and will be launched in early 2010<sup>7</sup>.

A copy of the full report, data cubes, and more are available at [http://www.dhp.virginia.gov/dhp\\_programs/hwdc/default.htm](http://www.dhp.virginia.gov/dhp_programs/hwdc/default.htm).

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<sup>7</sup> Once results from the 2010-2011 licensure renewal survey have been finalized, a new baseline will be established from them.

## Virginia Department of Health Professions Healthcare Workforce Data Center

# Findings from the 2007 and 2008 Virginia Licensed Nurse Workforce Survey

### Introduction

With an increasing population comes a greater demand for healthcare services, especially for those over age 65. As the first of the nation's 78 million baby boomers begin to reach age 65 in 2011, the healthcare workforce will be faced with a growing number of older patients who are living longer and who tend to have complex health needs.<sup>8</sup> As with the U.S. population, Virginia's overall populace has continued to rise for decades. The U.S. Census Bureau July 1, 2008 estimate for Virginia's population was 7.77 million, up by over 310,000 from their July 1, 2004 estimate.<sup>9</sup> Virginia's relative increase has outpaced the national growth rate. Between April 1, 2000 and July 1, 2008, Virginia's population increased by 9.7% while the U.S. increase was 8%.<sup>10</sup> The most recent U.S. Census Bureau projections for the Commonwealth point to an even greater increase (12.6%) by 2020, resulting in approximately **one million** more Virginians than today and will be relatively older. Today, residents aged 65 and older comprise about 12 percent of the state's population. However, by 2020, the latest estimates indicate that they will constitute approximately 16 percent.<sup>11</sup> Essential to meet this growing demand is an adequate supply of health care providers.

Over the past 10 years nursing has been one of the fastest growing occupational groups in the country and continues to be cited as having one of the greatest expected growth rates in absolute numbers.<sup>12</sup> This is the case for both RNs and LPNs. According to the U.S. Department of Labor's *Occupational Outlook Handbook, 2008-09 Edition* from the Bureau of Labor Statistics, registered nurses (RNs) constitute the largest healthcare occupation in the United States with 2.5 million jobs in 2006.

The number of licensed practical nurses (LPNs) across the U.S. is more difficult to determine due to different licensing regulations within states but was reported to be 889,027 by the National Council of State Boards of Nursing in 2000.<sup>13</sup> For 2006, the *Occupational Outlook Handbook, 2008-09 Edition* reported that

<sup>8</sup> Institute of Medicine (2008, April 14). *News from the National Academies*. Accessed November 11, 2009 at: <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12089>.

<sup>9</sup> U.S. Census Bureau, NST-EST 2008-01 Population Estimates from *America Fast Facts*. Accessed November 11, 2009 at [http://factfinder.census.gov/servlet/DatasetTableListServlet?\\_ds\\_name=PEP\\_2008\\_EST&\\_table=NST-EST%202008-01%20Population%20Estimates%20from%20America%20Fast%20Facts&\\_lang=en&\\_ts=278431161050](http://factfinder.census.gov/servlet/DatasetTableListServlet?_ds_name=PEP_2008_EST&_table=NST-EST%202008-01%20Population%20Estimates%20from%20America%20Fast%20Facts&_lang=en&_ts=278431161050).

<sup>10</sup> U.S. Census Bureau, *State & County QuickFacts*. Accessed November 16, 2009 at: <http://www.quickfacts.census.gov/qfd/states/51000.html>.

<sup>11</sup> U.S. Census Bureau, Population Division. *Interim State Population Projections for Five-Year Age Groups by Sex: July 1, 2004 to 2030*. Accessed November 11, 2009 at [http://factfinder.census.gov/servlet/GCTTable?\\_bm=y&\\_state=gct&\\_ds\\_name=PEP\\_2008\\_EST&\\_box\\_head\\_nbr=GCT-T1-R&\\_mt\\_name=&\\_caller=geoselect&\\_geo\\_id=&\\_format=US-40S&\\_lang=en](http://factfinder.census.gov/servlet/GCTTable?_bm=y&_state=gct&_ds_name=PEP_2008_EST&_box_head_nbr=GCT-T1-R&_mt_name=&_caller=geoselect&_geo_id=&_format=US-40S&_lang=en).

<sup>12</sup> U.S. Bureau of Labor Statistics, *Occupational Outlook Handbook: 2008-09 edition*. Accessed April 13, 2009 at: <http://www.bls.gov/oco/ocotit1.htm>.

<sup>13</sup> U.S. Bureau of Health Professions, HRSA (2009). *Supply Demand and Use of Licensed Practical Nurses*. Accessed April 13, 2009 at: <http://bhpr.hrsa.gov/healthworkforce/reports/nursing/lpn/default.htm>.

approximately 749,000 "licensed practical nurse" were employed.<sup>14</sup> It should be noted that this estimate was based upon employment data and does not directly reference the state licensure status of the employees.

The Bureau of Labor Statistics characterizes future RN job opportunities as excellent. However, this may vary by job setting (e.g., hospital, physicians office, ambulatory care, home health care, long-term care, public/health community, school health, occupational health, mental health facility, insurance company, nursing education, military base, and other). In 2006, approximately 59 % of RN's in the U.S. worked in hospitals.<sup>15</sup> The growth of LPNs is anticipated to be faster than average. Approximately 26% of LPNs worked in hospitals another 26% in nursing care facilities. The remainder for both worked in a variety of settings, from physician offices, home health care, and residential care to employment services and governmental agencies.

Understanding the workforce behavior of RNs and LPNs licensed in Virginia is an important element in being able to plan for the state's needs. Until information collected in the upcoming 2010-11 license renewal survey have been obtained and analyzed, the following existing information provides insight into the personal and professional characteristics of Virginia licensed RNs and LPNs based upon the responses of those who participated in the in 2007 and 2008 renewal survey. Both surveys may be found in the Appendix section of this report.

## Study Methods

Beginning in 2006, the Virginia Board of Nursing created a questionnaire focused on the workforce characteristics of nurses. Fully implemented in 2007, this questionnaire was made available to all RNs and LPNs who renewed their license to practice via the Internet. Nurses in Virginia renew their license every other year during the month they were born. About half of all licensed nurses renew in even-numbered years, and the other half in odd-numbered years. By combining the survey results from 2007 and 2008 the resulting information captures all nurses who renewed their license on-line during that period and participated in the survey. Over the past two years 78% of all licensed LPNs and 89% of RNs have renewed on-line.

Even though the majority of licensed nurses in Virginia completed the workforce survey questions (see Table 1), the number of respondents does not equal the total number of nurses licensed in the state during the 2007 – 2008 period. The numbers presented in these tables are based on the nurses completing the workforce questionnaire in 2007 and 2008 and do not represent the entire nursing workforce during that period. However, given the high response rate, these percentages provide a good estimate of workforce behavior among the state's nursing workforce.

There are several issues that affect the data. First, newly graduated nurses, and other nurses who are newly licensed in Virginia, were not included as part of the following analyses due to the fact that the survey questionnaire was only available to nurses going through the on-line license *renewal* process. Newly licensed nurses were excluded because they did not have access to the questionnaire. New graduates -- those brand new to the nursing workforce -- were viewed as most likely to be employed and more likely to be employed in hospitals than in other settings. Other newly licensed nurses were considered likely to reflect the general

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<sup>14</sup> U.S. Bureau of Labor Statistics, *Occupational Outlook Handbook: 2008-09 edition, Licensed Practical and Vocational Nurses*. Accessed December 9, 2009 at: <http://www.bls.gov/oco/ocos12.htm>.

<sup>15</sup> U.S. Bureau of Labor Statistics, *Occupational Outlook Handbook: 2008-09 edition*. Table 1. Fastest growing occupations and occupations projected to have the largest numerical increases in employment between 2006 and 2016, by level of postsecondary education or training. Accessed April 13, 2009 at: <http://www.bls.gov/oco/ocotit1.htm>.

workforce behavior of the nurses who responded to the survey. Overall, the number of nurses obtaining a new license to practice in Virginia during 2007 and 2008 was a small fragment of the total population of nurses: about 7% of all RNs and 8% of all LPNs.<sup>16</sup> For that reason it was deemed unlikely that their omission would have a meaningful impact on the results presented in this report.

**Table 1. Nursing license renewal information and workforce survey response rates for 2007 and 2008**

|               | Total # of nurse licenses renewed in 2007 and 2008 | # of nurse licenses renewed on-line in 2007 and 2008 | # of responses to the workforce survey | Survey response rate for on-line renewers | Survey response rate for <u>all</u> renewers |
|---------------|--|--|--|---|--|
| <b>LPNs</b>   | 24,575   | 19,097   | 13,369                                 | 70.0%                                     | 54.4%  |
| <b>RNs</b>    | 76,563   | 67,975   | 53,785                                 | 79.1%                                     | 70.3%  |
| <b>Totals</b> | 101,138  | 87,072   | 67,154                                 | 77.1%                                     | 66.4%  |

A second issue that may have an impact, but one that can not be measured, is the fact that Virginia is a member of the national nursing license compact. This multi-state agreement between Boards of Nursing allows nurses (RNs and LPNs) to be licensed in their state of residence and have their license recognized in all other compact member states. There are currently 22 states that recognize this compact agreement. All but one of the states that border Virginia (West Virginia) are also in the compact. The result for Virginia is that some of the nurses who practice here may not be licensed through the Virginia Board of Nursing and, thus, have no access to the workforce survey. Conversely, some nurses licensed in Virginia may be practicing in other compact-member states, especially those that are contiguous border states.

This report is organized in three sections which focus on the employment characteristics of:

- All licensed RNs and LPNs,
- Only those RNs and LPNs employed in the nursing workforce within the state of Virginia, and
- Advanced practice RNs in active practice within the state of Virginia.

To identify nurses employed within nursing positions two different questions in the survey indicated employment status (in or outside of nursing). To identify nurses employed within the state of Virginia, primary practice zip codes were matched to a list of all active zip codes in the state of Virginia as of December, 2008. Any zip code not on that list identified the respondent as someone practicing outside of the state. Respondents who did not provide a practice location zip code were assumed to be practicing outside of Virginia. The result of this process is a conservative estimate of the Virginia nursing workforce. It is likely that some nurses who did not supply a practice location zip code may have been actually practicing within Virginia. But it was not possible to discern their status because no other practice location information was available.

Advanced practice RNs are required to hold an additional license to practice in Virginia beyond their RN license and must be certified in their area of clinical specialization by a recognized accrediting agency. In 2007 and 2008 the following types of advanced practice RNs were licensed by the state of Virginia:

- Adult nurse practitioner,
- Family nurse practitioner,
- Pediatric nurse practitioner,
- Geriatric nurse practitioner,

<sup>16</sup> Source: Commonwealth of Virginia Board of Nursing, Nursing Education Programs and Nurse Aide Education Programs Report of Statistics, July 1, 2007 – June 30, 2008.

- Neonatal nurse practitioner,
- Women's health nurse practitioner,
- Acute care nurse practitioner,
- Psychiatric nurse practitioner,
- Certified registered nurse anesthetist, and
- Certified nurse midwife.

For Virginia, all of these RNs with advanced practice licenses are referred to as “Nurse Practitioners.” Note that clinical nurse specialist (CNS) is not included as one of the APRN roles licensed by Virginia. However, there is a voluntary registry for clinical nurse specialists. To join the registry CNS RNs must provide evidence of their Master’s degree and certification in their clinical area.

The APRNs included in this report are those who also have a Virginia RN license and renewed that RN license during 2007 or 2008. Any APRN practicing in the state but holding an RN license from another compact state did not have access to the workforce survey. APRNs were asked to identify themselves as such in the workforce survey and were asked whether they were currently practicing in that role at the time they answered the questionnaire. The current analysis includes RNs who identified themselves as clinical nurse specialists regardless of their education level.

## Results

### All Nurses Licensed in Virginia

All nurses were asked to report their current employment status at the time they completed the workforce survey. Table 2 summarizes their responses. Of all the nurses licensed to practice by the state of Virginia and responding to the survey, approximately 84% reported being in the nursing workforce: either by being actively employed in a nursing position or by seeking nursing employment. This is consistent with national research findings from the 2004 National Sample Survey of Registered Nurses.<sup>17</sup> Note the consistency between Virginia’s LPNs and RNs in this regard (see Table 2).

Among both LPNs and RNs responding, approximately 5% reported being employed in a field other than nursing. Unfortunately, the questionnaire was not able to capture whether those nurses were employed in another branch of health care. It is not clear whether their nursing background might play a role in their current employment status. Another 5% of both RNs and LPNs indicated that they have temporarily left the workforce and are not actively seeking nursing employment. These nurses may return to the nursing workforce in the future. Although these nurses may be considered a “shadow” workforce that can potentially be lured back into the workplace in times of shortage because they already hold an active license to practice, little empirical research has been done to test that assumption. Further it is unclear what proportion of these nurses have maintained their clinical competence while out of the workforce.

Having an active license to practice in a profession contributes to ones professional identity; 2.5% of LPNs and 3.4% of RNs who reported maintaining a license to practice in Virginia but indicated they have no plans to return to work in nursing.

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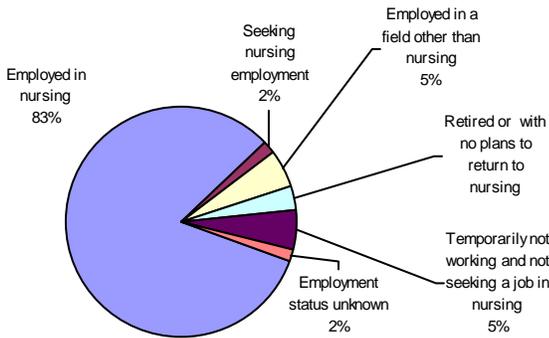
<sup>17</sup> The Registered Nurse Population: Findings from the March 2004 National Sample Survey of Registered Nurses. June, 2006. U.S. Dept. of Health and Human Services, Health Resources and Services Administration (HRSA). The 2008 survey has been completed, but results will not be available until late in 2009.

**Table 2. Employment status of all nurses licensed in Virginia, 2007 and 2008**

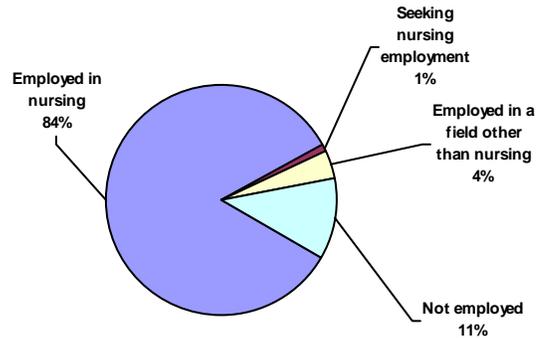
| Employment Status  | LPNs          |              | RNs           |             |
|--|---------------|--------------|---------------|-------------|
|  | #             | %            | #             | %           |
| Employed in nursing anywhere                                 | 10,855        | 81.2         | 44,291        | 82.3        |
| Seeking nursing employment                                   | 405           | 3.0          | 1,064         | 2.0         |
| Employed in another field other than nursing                 | 781           | 5.8          | 2,823         | 5.2         |
| Retired or with no plans to return to work in nursing        | 337           | 2.5          | 1,841         | 3.4         |
| Temporarily not working and not looking for a job in nursing | 694           | 5.2          | 2,878         | 5.4         |
| Employment status unknown                                    | 297           | 2.2          | 888           | 1.7         |
| <b>Totals</b>  | <b>13,369</b> | <b>99.9%</b> | <b>53,785</b> | <b>100%</b> |

Although over 80% of licensed nurses in Virginia reporting said they are employed in nursing, it does not necessarily mean that practiced within the state of Virginia. Two data elements available in the survey were used to identify nurses reporting active practicing within Virginia: their self-report of being employed in a nursing position and the zip code of their primary practice location. Zip codes were matched to a list of all active zip codes in the state of Virginia as of December, 2008. The group identified as being in the nursing workforce in Virginia in subsequent tables in this report are those nurses who reported themselves as employed in nursing and with an active Virginia zip code as their primary practice location. Table 3 summarizes how respondents to the 2007 and 2008 workforce survey were identified in this regard.

**Figure 1. Employment status among Virginia RNs**



**Figure 2. National RN employment status**



Source: 2004 National Sample Survey of RNs

**Table 3. Number and percent of workforce survey respondents identified as practicing in Virginia**

| Employed in nursing in Virginia? | LPNs          |             | RNs           |             |
|----------------------------------|---------------|-------------|---------------|-------------|
|                                  | #             | %           | #             | %           |
| No                               | 824           | 7.6         | 4,416         | 9.9         |
| Yes                              | 8,624         | 79.2        | 34,376        | 77.3        |
| Unknown                          | 1,442         | 13.2        | 5,693         | 12.8        |
| <b>Totals</b>                    | <b>10,890</b> | <b>100%</b> | <b>44,485</b> | <b>100%</b> |

#### Location of Initial Licensure.

One policy question often asked is whether healthcare professionals who receive their initial licenses to practice in a specific state are more or less likely to stay in that state and, conversely, to what extent the healthcare workforce is composed of professionals moving into the state from other locales. The findings in Table 4 illustrate that the majority (72.3%) of responding LPNs who were currently licensed in Virginia received their first license to practice in Virginia.<sup>18</sup> For responding RNs currently licensed in the state, the proportion initially licensed here was still a majority but lower (56%). This is not surprising given the wide range of educational levels among RNs and their broader labor market opportunities compared to LPNs. Almost all of the responding LPNs and RNs who have migrated from another state or country into Virginia reported being active in the nursing workforce within Virginia.

**Table 4. Percentage of nurses receiving their initial license to practice in Virginia**

| Initial license was in Virginia? | LPNs                 |             |                           |             | RNs                  |             |                           |             |
|----------------------------------|----------------------|-------------|---------------------------|-------------|----------------------|-------------|---------------------------|-------------|
|                                  | licensed in Virginia |             | employed in nursing in VA |             | licensed in Virginia |             | employed in nursing in VA |             |
|                                  | #                    | %           | #                         | %           | #                    | %           | #                         | %           |
| No – outside of Virginia         | 1,859                | 13.9        | 1,201                     | 13.9        | 18,189               | 33.8        | 11,446                    | 33.3        |
| Yes                              | 9,667                | 72.3        | 6,648                     | 77.1        | 30,141               | 56.0        | 20,467                    | 59.5        |
| Initial license location unknown | 1,843                | 13.8        | 775                       | 9.0         | 5,455                | 10.1        | 2,465                     | 7.2         |
| <b>Totals</b>                    | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>100%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

#### Demographic Characteristics of Virginia's Nurses

Tables 5 through 10 describe the demographic characteristics of: 1) all responding nurses licensed to practice in Virginia, and 2) responding nurses actively practicing within the state of Virginia.

A study of the national LPN workforce published in 2004<sup>19</sup> found that men make up about 5% of all LPNs. Virginia's 2007-2008 survey results indicate that 4.5% of responders employed in nursing in Virginia were male.

<sup>18</sup> The large amount of missing data on location of initial license makes the percentages initially licensed inside or outside of Virginia the most conservative estimate. Some of those who did not report this information were likely to have received their initial license in Virginia.

<sup>19</sup> Supply, Demand and Use of Practical Nurses, November 2004. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Evaluation and Quality Assurance by the Center for Health Workforce Distribution Studies, University of California, San Francisco under Grant # 1-U79-HP-00032-01

National survey results from 2004 estimated that men comprised 5.8% of all licensed RNs in the country.<sup>20</sup> Virginia's 2007-08 survey results indicate that 5.6% of responders and of those employed in nursing in Virginia were male.

**Table 5. Gender characteristics of nurses licensed and/or employed in nursing in Virginia**

| Gender        | LPNs                 |             |                           |             | RNs                  |             |                           |             |
|---------------|----------------------|-------------|---------------------------|-------------|----------------------|-------------|---------------------------|-------------|
|               | licensed in Virginia |             | employed in nursing in VA |             | licensed in Virginia |             | employed in nursing in VA |             |
|               | #                    | %           | #                         | %           | #                    | %           | #                         | %           |
| Female        | 12,236               | 91.5        | 8,040                     | 93.2        | 49,039               | 91.2        | 31,683                    | 92.2        |
| Male          | 610                  | 4.6         | 384                       | 4.5         | 3,013                | 5.6         | 1,933                     | 5.6         |
| Unknown       | 523                  | 3.9         | 200                       | 2.3         | 1,733                | 3.2         | 762                       | 2.2         |
| <b>Totals</b> | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>100%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

The racial characteristics of Virginia's reporting licensed RNs were very similar to the profile of RNs from the 2004 National Sample Survey of RNs, with two exceptions: Virginia's survey had a higher proportion of Black RNs (8.0%) than found in the national study (4.2%); and a slightly higher proportion of Asian and/or Pacific Islander RNs (4.2%) than found in the national study (3.1%). However, it should be noted that the 2004 National Sample Survey of RNs suffered from a large amount (7.5%) of missing data on the race and ethnicity questions which may have affected their results. The race and ethnicity characteristics of responding LPNs licensed in Virginia were almost identical to the findings of the 2004 national study of LPNs referenced earlier, the only difference being a slightly lower proportion of Black LPNs (23.4%) than was found nationally (26%).

**Table 6. Racial characteristics of nurses licensed and/or employed in nursing in Virginia**

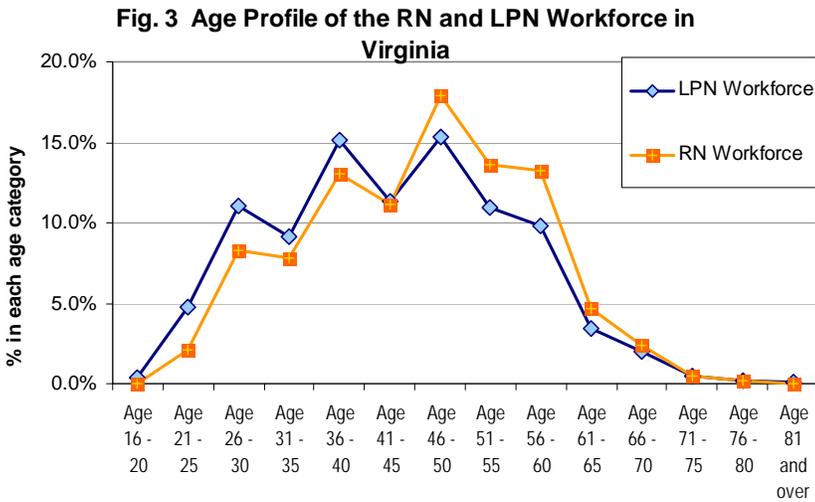
| Race                           | LPNs                 |             |                           |             | RNs                  |             |                           |             |
|--------------------------------|----------------------|-------------|---------------------------|-------------|----------------------|-------------|---------------------------|-------------|
|                                | licensed in Virginia |             | employed in nursing in VA |             | licensed in Virginia |             | employed in nursing in VA |             |
|                                | #                    | %           | #                         | %           | #                    | %           | #                         | %           |
| White, not of Hispanic origin  | 9,050                | 67.7        | 5,875                     | 68.1        | 44,426               | 82.6        | 28,692                    | 83.5        |
| Black, not of Hispanic origin  | 3,134                | 23.4        | 2,080                     | 24.1        | 4,310                | 8.0         | 2,801                     | 8.1         |
| American Indian/Alaskan Native | 61                   | 0.5         | 33                        | 0.4         | 135                  | 0.3         | 78                        | 0.2         |
| Asian/Pacific Islander         | 179                  | 1.3         | 124                       | 1.4         | 2,262                | 4.2         | 1,437                     | 4.2         |
| Multi-racial                   | 277                  | 2.1         | 194                       | 2.2         | 594                  | 1.1         | 408                       | 1.2         |
| Hispanic                       | 171                  | 1.3         | 118                       | 1.4         | 616                  | 1.1         | 387                       | 1.1         |
| Other                          | 186                  | 1.4         | 120                       | 1.4         | 542                  | 1.0         | 332                       | 1.0         |
| Unknown                        | 311                  | 2.3         | 80                        | 0.9         | 900                  | 1.7         | 243                       | 0.7         |
| <b>Totals</b>                  | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>100%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

<sup>20</sup> The Registered Nurse Population: Findings from the March 2004 National Sample Survey of Registered Nurses. June, 2006. U.S. Dept. of Health and Human Services, Health Resources and Services Administration (HRSA).

The average age in the national population of Registered nurses reported in 2004 was 46.8 years which was exactly the average age of responding licensed RNs in Virginia who renewed their licenses in 2007 and 2008. This may mean that Virginia’s RNs were slightly younger than the national average, because the national trend has been a steady increase each year. If that trend continues to hold, the 2008 national study will show a higher average age. However, there has also been a national expansion of entry-level education programs for

RNs in recent years that may be contributing to an increase in the number of younger nurses entering the profession. Once the results of the 2008 national study of RNs are available, it will be possible to better compare Virginia's RNs trend in terms of age.

Both Table 7 and Figure 3 reveal that the responding RN workforce in Virginia is slightly older than the responding LPN workforce. On the national level it has been the reverse: LPNs have been older than RNs in the workforce.



**Table 7. Age characteristics of nurses licensed and/or employed in nursing in Virginia**

| Age Categories  | LPNs                 |             |                           |             | RNs                  |             |                           |             |
|-----------------|----------------------|-------------|---------------------------|-------------|----------------------|-------------|---------------------------|-------------|
|                 | licensed in Virginia |             | employed in nursing in VA |             | licensed in Virginia |             | employed in nursing in VA |             |
|                 | #                    | %           | #                         | %           | #                    | %           | #                         | %           |
| Age 16 – 20     | 48                   | 0.4         | 30                        | 0.3         | 10                   | 0.0         | 6                         | 0.0         |
| Age 21 – 25     | 570                  | 4.3         | 409                       | 4.7         | 975                  | 1.8         | 718                       | 2.1         |
| Age 26 – 30     | 1,345                | 10.1        | 952                       | 11.0        | 3,989                | 7.4         | 2,862                     | 8.3         |
| Age 31 – 35     | 1,134                | 8.5         | 785                       | 9.1         | 3,873                | 7.2         | 2,679                     | 7.8         |
| Age 36 – 40     | 1,820                | 13.6        | 1,302                     | 15.1        | 6,419                | 11.9        | 4,479                     | 13.0        |
| Age 41 – 45     | 1,423                | 10.6        | 978                       | 11.3        | 5,539                | 10.3        | 3,825                     | 11.1        |
| Age 46 – 50     | 1,943                | 14.5        | 1,319                     | 15.3        | 9,137                | 17.0        | 6,162                     | 17.9        |
| Age 51 – 55     | 1,398                | 10.5        | 942                       | 10.9        | 7,160                | 13.3        | 4,666                     | 13.6        |
| Age 56 – 60     | 1,301                | 9.7         | 850                       | 9.9         | 7,031                | 13.1        | 4,536                     | 13.2        |
| Age 61 – 65     | 471                  | 3.5         | 297                       | 3.4         | 2,810                | 5.2         | 1,592                     | 4.6         |
| Age 66 – 70     | 310                  | 2.3         | 173                       | 2.0         | 1,640                | 3.0         | 825                       | 2.4         |
| Age 71 – 75     | 87                   | 0.7         | 43                        | 0.5         | 352                  | 0.7         | 178                       | 0.5         |
| Age 76 – 80     | 35                   | 0.3         | 19                        | 0.2         | 114                  | 0.2         | 61                        | 0.2         |
| Age 81 and over | 11                   | 0.1         | 5                         | 0.1         | 20                   | 0.0         | 10                        | 0.0         |
| Age unknown     | 1,473                | 11.0        | 520                       | 6.0         | 4,716                | 8.8         | 1,779                     | 5.2         |
| <b>Totals</b>   | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>100%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

The educational characteristics of nurses licensed in Virginia, as well as those actively employed in nursing positions within the state, are revealed in the following tables. Table 8 reports the highest academic degree held. Most nurses follow an educational path that begins in nursing. However, there are nurses who come into

the profession as a second career choice and may bring with them academic degrees higher than their entry-level nursing program.

**Table 8. Highest educational degree among nurses licensed and/or employed in nursing in Virginia**

| Highest educational degree    | LPNs                 |             |                           |             | RNs                  |             |                           |             |
|-------------------------------|----------------------|-------------|---------------------------|-------------|----------------------|-------------|---------------------------|-------------|
|                               | licensed in Virginia |             | employed in nursing in VA |             | licensed in Virginia |             | employed in nursing in VA |             |
|                               | #                    | %           | #                         | %           | #                    | %           | #                         | %           |
| LPN Diploma/Certificate       | 12,002               | 89.8        | 7,812                     | 90.6        | 32                   | 0.1         | 17                        | 0.0         |
| RN Diploma                    | 19                   | 0.1         | 15                        | 0.2         | 8,523                | 15.8        | 5,421                     | 15.8        |
| Associate Degree, Nursing     | 246                  | 1.8         | 164                       | 1.9         | 14,153               | 26.3        | 9,360                     | 27.2        |
| Associate Degree, Other       | 519                  | 3.9         | 314                       | 3.6         | 556                  | 1.0         | 350                       | 1.0         |
| Baccalaureate Degree, Nursing | 29                   | 0.2         | 18                        | 0.2         | 17,279               | 32.1        | 11,191                    | 32.6        |
| Baccalaureate Degree, Other   | 349                  | 2.6         | 211                       | 2.4         | 3,442                | 6.4         | 2,143                     | 6.2         |
| Master's Degree, Nursing      | 5                    | 0.0         | 4                         | 0.0         | 5,786                | 10.8        | 3,775                     | 11.0        |
| Master's Degree, Other        | 77                   | 0.6         | 41                        | 0.5         | 2,954                | 5.5         | 1,623                     | 4.7         |
| Doctoral Degree, Nursing      | 0                    | 0.0         | 0                         | 0.0         | 294                  | 0.5         | 192                       | 0.6         |
| Doctoral Degree, Other        | 10                   | 0.1         | 5                         | 0.1         | 416                  | 0.8         | 212                       | 0.6         |
| Unknown                       | 113                  | 0.8         | 40                        | 0.5         | 350                  | 0.7         | 94                        | 0.3         |
| <b>Totals</b>                 | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>100%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

Unfortunately, it is not possible to compare the educational attainment of Virginia's LPNs and RNs with national statistics because the way in which education was measured in the most recent national studies differed substantially from each other and from Virginia's workforce survey method. However, the workforce survey did collect information on both entry-level education and highest degree that makes it possible to determine if nurses licensed in Virginia achieve educational mobility. Table 9 summarizes the findings. Less than 10% of LPNs attain additional education beyond their practical nursing education. But more than one-third of RNs exhibit some educational mobility.

**Table 9. Educational mobility among nurses licensed and/or employed in nursing in Virginia**

| Educational mobility? | LPNs                 |             |                           |             | RNs                  |             |                           |             |
|-----------------------|----------------------|-------------|---------------------------|-------------|----------------------|-------------|---------------------------|-------------|
|                       | licensed in Virginia |             | Employed in nursing in VA |             | licensed in Virginia |             | employed in nursing in VA |             |
|                       | #                    | %           | #                         | %           | #                    | %           | #                         | %           |
| No                    | 12,098               | 90.5        | 7,871                     | 91.3        | 33,080               | 61.5        | 21,417                    | 62.3        |
| Yes                   | 1,157                | 8.7         | 713                       | 8.3         | 20,340               | 37.8        | 12,844                    | 37.4        |
| Unknown               | 114                  | 0.9         | 40                        | 0.5         | 365                  | 0.7         | 117                       | 0.3         |
| <b>Totals</b>         | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>100%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

Table 10 reports the number of licensed nurses that said they were currently enrolled in an advanced degree program at the time they renewed their Virginia license in 2007 or 2008. It should be noted that although the question in the 2007-2008 survey read: "Are you currently enrolled in a nursing education program leading to an advanced degree?" the term 'advanced degree' was not further defined. It is doubtful that 8.7% of the LPNs licensed in Virginia are enrolled in a Master's program, which would be the traditional definition of an advanced degree. But it is understandable that any academic degree might be perceived as advancement by

LPNs. The large portion of RNs reporting current enrollment in an advanced degree program may also suffer from this lack of definition.

**Table 10. Nurses licensed and/or employed in nursing in Virginia extending their education**

| Enrolled in an advanced degree program? | LPNs                 |             |                           |              | RNs                  |             |                           |             |
|---|----------------------|-------------|---------------------------|--------------|----------------------|-------------|---------------------------|-------------|
|   | licensed in Virginia |             | Employed in nursing in VA |              | licensed in Virginia |             | employed in nursing in VA |             |
|   | #                    | %           | #                         | %            | #                    | %           | #                         | %           |
| No                                      | 9,702                | 72.6        | 6,254                     | 72.5         | 41,030               | 76.3        | 26,173                    | 76.1        |
| Yes                                     | 1,943                | 14.5        | 1,410                     | 16.3         | 4,755                | 8.8         | 3,402                     | 9.9         |
| Unknown                                 | 1,724                | 12.9        | 960                       | 11.1         | 8,000                | 14.9        | 4,803                     | 14.0        |
| <b>Totals</b>                           | <b>13,369</b>        | <b>100%</b> | <b>8,624</b>              | <b>99.9%</b> | <b>53,785</b>        | <b>100%</b> | <b>34,378</b>             | <b>100%</b> |

#### Employment characteristics of Virginia's nursing workforce

This section of the report focuses on nurses identified as employed in nursing positions within the state of Virginia. Nurses were asked to report the amount of time worked each week, the type of Role they work in (clinical versus other types), the types of settings they work in, how long they have been in their current job, as well as questions about their level of job satisfaction and the length of time they expect to stay employed in nursing. All of these characteristics are reported in the Tables 11 through 22.

There were two separate questions in the workforce survey that allowed nurses to identify whether they were employed in a nursing position or in some other type of position. In a few cases there was inconsistency in the way these questions were answered. Most of those inconsistencies could be rectified, but a few could not. One reason for this may be that some of the reporting nurses who work outside of traditional nursing settings, such as nurses who do case management for insurance companies may sometimes consider their work to be "outside" of nursing. In any case, the proportion of nurses with this type of inconsistency was very small, as can be seen in Table 11, and all of those nurses reported part-time employment.

More than 80% of both RNs and LPNs employed in nursing positions within Virginia reported being employed full-time (defined as more than 32 hours per week). For Virginia's responding RNs, this level of full-time employment was substantially higher than the 70% reported in the 2004 National Sample Survey of RNs. There is no comparable measure of full- and part-time employment available at the national level for LPNs.

**Table 11. Proportion of Virginia's nursing workforce employed in full or part time positions**

| Hours worked per week                               | LPNs in the Virginia Workforce |             | RNs in the Virginia Workforce |             |
|---|--------------------------------|-------------|-------------------------------|-------------|
|   | #                              | %           | #                             | %           |
| Employed 32 hours/week or more in nursing           | 7,255                          | 84.1        | 27,790                        | 80.8        |
| Employed less than 32 hours/week in nursing         | 1,312                          | 15.2        | 6,325                         | 18.4        |
| Employed less than 32 hours/week outside of nursing | 8                              | 0.1         | 37                            | 0.1         |
| Employment hours unknown                            | 49                             | 0.6         | 226                           | 0.7         |
| <b>Totals</b>                                       | <b>8,624</b>                   | <b>100%</b> | <b>34,378</b>                 | <b>100%</b> |

Tables 12 through 15 report the proportion of the Virginia responding LPN and RN workforce found in different work Roles and employment settings. Not surprisingly, given their different scopes of practice, there are substantial differences between LPNs and RNs in terms of where they reported being deployed in the work place. Tables 14 and 15 provide the most detailed insight. In Virginia, the great majority of responding nurses reported work in a clinical Role (see Table 12). About half of all the responding RNs employed in nursing positions in Virginia were located in hospitals (see Table 13), slightly lower than the 56.2% found in the National Sample Survey of RNs.<sup>21</sup>

**Table 12. Proportion of Virginia’s nursing workforce employed in specific work Roles**

| Work Role                   | LPNs in the Virginia Workforce |             | RNs in the Virginia Workforce |             |
|-----------------------------|--------------------------------|-------------|-------------------------------|-------------|
|                             | #                              | %           | #                             | %           |
| Clinical                    | 7,228                          | 83.8        | 26,486                        | 77.0        |
| Consultative/Regulatory     | 135                            | 1.6         | 692                           | 2.0         |
| Education/Staff Development | 285                            | 3.3         | 1,916                         | 5.6         |
| Managerial/Administrative   | 899                            | 10.4        | 5,012                         | 14.6        |
| Unknown                     | 77                             | 0.9         | 272                           | 0.8         |
| <b>Totals</b>               | <b>8,624</b>                   | <b>100%</b> | <b>34,378</b>                 | <b>100%</b> |

Almost one-third of the responding LPN workforce reported being employed in hospitals, another 20% in long term care settings, and about 16% in physician offices or medical practices (see Table 13). In the most recent national studies of LPNs, between 26 and 32% were found in hospitals, between 26 and 32% in long term care or nursing care settings, and the remainder in physician offices and other settings.<sup>22 23</sup>

**Table 13. Proportion of Virginia’s nursing workforce by employment setting**

| Employment Setting      | LPNs in the Virginia Workforce |             | RNs in the Virginia Workforce |               |
|-------------------------|--------------------------------|-------------|-------------------------------|---------------|
|                         | #                              | %           | #                             | %             |
| Hospital                | 2,728                          | 31.6        | 18,186                        | 52.9          |
| Physician’s office      | 1,353                          | 15.7        | 2,644                         | 7.7           |
| Ambulatory care         | 315                            | 3.7         | 1,788                         | 5.2           |
| Home health care        | 611                            | 7.1         | 1,857                         | 5.4           |
| Long Term Care          | 1,736                          | 20.1        | 2,164                         | 6.3           |
| Public health/community | 223                            | 2.6         | 1,030                         | 3.0           |
| School health           | 200                            | 2.3         | 1,060                         | 3.1           |
| Occupational health     | 76                             | 0.9         | 332                           | 1.0           |
| Mental health facility  | 287                            | 3.3         | 727                           | 2.1           |
| Insurance company       | 90                             | 1.0         | 542                           | 1.6           |
| Nursing education       | 118                            | 1.4         | 896                           | 2.6           |
| Military base           | 61                             | 0.7         | 264                           | 0.8           |
| All other settings      | 671                            | 7.8         | 2,327                         | 6.8           |
| Unknown                 | 155                            | 1.8         | 561                           | 1.6           |
| <b>Totals</b>           | <b>8,624</b>                   | <b>100%</b> | <b>34,378</b>                 | <b>100.1%</b> |

<sup>21</sup> *The Registered Nurse Population: Findings from the March 2004 National Sample Survey of Registered Nurses*. June, 2006. Bureau of Health Professions (HRSA).

<sup>22</sup> *Supply Demand and Use of Licensed Practical Nurses*. Bureau of Health Professions, HRSA.

<sup>23</sup> *Occupational Outlook Handbook: 2008-09 edition, Licensed Practical and Vocational Nurses*. U. S. Bureau of Labor Statistics.

Tables 14 and 15 reveal the ways in which the responding LPN and RN nursing workforce reported being deployed within each employment setting. These tables should be read *across the row*, rather than down the column. Each row shows the proportion of nurses (Table 14 reports on LPNs, Table 15 on RNs) in that setting who are employed in different types of work Roles. For example, among LPNs employed in Virginia hospitals, 88.4% are in clinical roles and 8% are in managerial or administrative roles.

**Table 14. Proportion of Virginia’s LPNs deployed into different work Roles within their setting**

| LPN Work Role by Job Setting | Clinical |      | Consultative / Regulatory |      | Education / Staff Development |      | Managerial / Administrative |      | Work Role Unknown |     | Row N |
|------------------------------|----------|------|---------------------------|------|-------------------------------|------|-----------------------------|------|-------------------|-----|-------|
|                              | #        | %    | #                         | %    | #                             | %    | #                           | %    | #                 | %   |       |
| Hospital                     | 2,412    | 88.4 | 31                        | 1.1  | 51                            | 1.9  | 219                         | 8.0  | 15                | 0.5 | 2728  |
| Physician’s office           | 1,263    | 93.3 | 1                         | 0.1  | 8                             | 0.6  | 74                          | 5.5  | 7                 | 0.5 | 1353  |
| Ambulatory Care              | 277      | 87.9 | 1                         | 0.3  | 6                             | 1.9  | 31                          | 9.8  | 0                 | 0.0 | 315   |
| Home health care             | 487      | 79.7 | 10                        | 1.6  | 11                            | 1.8  | 93                          | 15.2 | 10                | 1.6 | 611   |
| Long Term Care               | 1,406    | 81.0 | 21                        | 1.2  | 33                            | 1.9  | 260                         | 15.0 | 16                | 0.9 | 1736  |
| Public health/community      | 182      | 81.6 | 6                         | 2.7  | 12                            | 5.4  | 23                          | 10.3 | 0                 | 0.0 | 223   |
| School health                | 172      | 86.0 | 0                         | 0.0  | 18                            | 9.0  | 8                           | 4.0  | 2                 | 1.0 | 200   |
| Occupational health          | 50       | 65.8 | 5                         | 6.6  | 1                             | 1.3  | 20                          | 26.3 | 0                 | 0.0 | 76    |
| Mental health facility       | 250      | 87.1 | 4                         | 1.4  | 6                             | 2.1  | 25                          | 8.7  | 2                 | 0.7 | 287   |
| Insurance company            | 25       | 27.8 | 21                        | 23.3 | 6                             | 6.7  | 36                          | 40.0 | 2                 | 2.2 | 90    |
| Nursing Education            | 8        | 6.8  | 0                         | 0.0  | 104                           | 88.1 | 4                           | 3.4  | 2                 | 1.7 | 118   |
| Military Base                | 48       | 78.7 | 1                         | 1.6  | 2                             | 3.3  | 8                           | 13.1 | 2                 | 3.3 | 61    |
| Other                        | 521      | 77.6 | 33                        | 4.9  | 21                            | 3.1  | 88                          | 13.1 | 8                 | 1.2 | 671   |

Note: This table should be read across the row. The gray shading is to make the cell counts easier to read. The percentages in each row sum to 100%.

**Table 15. Proportion of Virginia’s RNs deployed into different work Roles within their setting**

| RN Work Role by Job Setting | Clinical |      | Consultative / Regulatory |      | Education / Staff Development |      | Managerial / Administrative |      | Work Role unknown |     | Row N  |
|-----------------------------|----------|------|---------------------------|------|-------------------------------|------|-----------------------------|------|-------------------|-----|--------|
|                             | #        | %    | #                         | %    | #                             | %    | #                           | %    | #                 | %   |        |
| Hospital                    | 15,501   | 85.2 | 149                       | 0.8  | 524                           | 2.9  | 1,913                       | 10.5 | 99                | 0.5 | 18,186 |
| Physician’s office          | 2,411    | 91.2 | 9                         | 0.3  | 8                             | 0.3  | 195                         | 7.4  | 21                | 0.8 | 2,644  |
| Ambulatory care             | 1,560    | 87.2 | 4                         | 0.2  | 22                            | 1.2  | 193                         | 10.8 | 9                 | 0.5 | 1,788  |
| Home health care            | 1,224    | 65.9 | 25                        | 1.3  | 51                            | 2.7  | 540                         | 29.1 | 17                | 0.9 | 1,857  |
| Long term care              | 1,218    | 56.3 | 57                        | 2.6  | 93                            | 4.3  | 773                         | 35.7 | 23                | 1.1 | 2,164  |
| Public health/community     | 733      | 71.2 | 32                        | 3.1  | 70                            | 6.8  | 192                         | 18.6 | 3                 | 0.3 | 1,030  |
| School health               | 896      | 84.5 | 1                         | 0.1  | 90                            | 8.5  | 65                          | 6.1  | 8                 | 0.8 | 1,060  |
| Occupational health         | 206      | 62.0 | 16                        | 4.8  | 11                            | 3.3  | 97                          | 29.2 | 2                 | 0.6 | 332    |
| Mental health facility      | 553      | 76.1 | 7                         | 1.0  | 22                            | 3.0  | 136                         | 18.7 | 9                 | 1.2 | 727    |
| Insurance company           | 136      | 25.1 | 117                       | 21.6 | 30                            | 5.5  | 250                         | 46.1 | 9                 | 1.7 | 542    |
| Nursing education           | 45       | 5.0  | 7                         | 0.8  | 810                           | 90.4 | 29                          | 3.2  | 5                 | 0.6 | 896    |
| Military base               | 187      | 70.8 | 10                        | 3.8  | 10                            | 3.8  | 57                          | 21.6 | 0                 | 0.0 | 264    |
| Other                       | 1,400    | 60.2 | 243                       | 10.4 | 149                           | 6.4  | 514                         | 22.1 | 21                | 0.9 | 2,327  |

Note: This table should be read across the row. The gray shading is to make the cell counts easier to read. The percentages in each row sum to 100%.

A comparison of the two tables shows that responding LPNs and RNs appear to be being deployed in similar ways within hospitals, physician offices, ambulatory care settings, school health sites, and in nursing education programs. A higher proportion of RNs than LPNs were found in managerial and administrative roles in home health agencies, public and community health settings, mental health facilities, insurance companies and on military bases. In many settings, the proportion of LPNs and RNs found in educational roles is similar (note that patient education and staff education are contained in the same category). In hospital settings, the proportion of responding LPNs and RNs reporting education roles was not that different. But in long term care, public health, and occupational health settings a higher proportion of RNs reported being in an educator role than did LPNs. Another area in which RNs were found more often was in consultative or regulatory roles. This is true in long term care settings and on military bases, but in occupational health and insurance companies a higher proportion of responding LPNs reported being in consultant and regulatory roles than did RNs in those same settings.

### Job Satisfaction

Nurses were asked to report their overall level of satisfaction with their current nursing position. The results show that responding LPNs and RNs reported very similar overall levels of job satisfaction (see Table 16). When all of those who reported being satisfied were combined, 91.4% of the responding LPN workforce in Virginia, and 91.1% of the responding RN workforce said they were satisfied. When the levels of dissatisfaction are combined, 7.1% of the LPNs and 7.8% of the RNs said they were dissatisfied. Although the proportion of responding nurses who report being dissatisfied was small, it may be important to understand if nurses in specific settings or work Roles respond differently. That question is addressed in Tables 17 and 18.

**Table 16. Job satisfaction levels among LPNs and RNs in the Virginia nursing workforce**

| Level of Job Satisfaction | LPNs in the Virginia Workforce |              | RNs in the Virginia Workforce |               |
|---------------------------|--------------------------------|--------------|-------------------------------|---------------|
|                           | #                              | %            | #                             | %             |
| Very satisfied            | 4,825                          | 55.9         | 18,386                        | 53.5          |
| Somewhat satisfied        | 3,061                          | 35.5         | 12,909                        | 37.6          |
| Somewhat dissatisfied     | 495                            | 5.7          | 2,165                         | 6.3           |
| Very dissatisfied         | 123                            | 1.4          | 513                           | 1.5           |
| Unknown                   | 120                            | 1.4          | 405                           | 1.2           |
| <b>Totals</b>             | <b>8,624</b>                   | <b>99.9%</b> | <b>34,378</b>                 | <b>100.1%</b> |

**Table 17. Job satisfaction by practice Role within Virginia's nursing workforce**

| Job Satisfaction by Work Role | LPNs in the Virginia Workforce |     |           |      | RNs in the Virginia Workforce |     |           |      |
|-------------------------------|--------------------------------|-----|-----------|------|-------------------------------|-----|-----------|------|
|                               | Not satisfied                  |     | Satisfied |      | Not satisfied                 |     | Satisfied |      |
|                               | #                              | %   | #         | %    | #                             | %   | #         | %    |
| Clinical                      | 542                            | 7.5 | 6,597     | 91.3 | 2,228                         | 8.4 | 23,971    | 90.5 |
| Consultative/Regulatory       | 5                              | 3.7 | 126       | 93.3 | 37                            | 5.3 | 639       | 92.3 |
| Education/Staff Development   | 12                             | 4.2 | 264       | 92.6 | 91                            | 4.7 | 1,803     | 94.1 |
| Managerial/Administrative     | 52                             | 5.8 | 833       | 92.7 | 307                           | 6.1 | 4,635     | 92.5 |

Note: Cases in which satisfaction or work Role were missing are not included in this table.

**Table 18. Job satisfaction by employment setting within Virginia’s nursing workforce**

| Job Satisfaction by Employment Setting | LPNs in the Virginia Workforce |     |           |      | RNs in the Virginia Workforce |      |           |      |
|--|--------------------------------|-----|-----------|------|-------------------------------|------|-----------|------|
|  | Not satisfied                  |     | Satisfied |      | Not satisfied                 |      | Satisfied |      |
|  | #                              | %   | #         | %    | #                             | %    | #         | %    |
| Ambulatory care                        | 14                             | 4.4 | 293       | 93.0 | 114                           | 6.4  | 1650      | 92.3 |
| Home health care                       | 38                             | 6.2 | 568       | 93.0 | 123                           | 6.6  | 1716      | 92.4 |
| Hospital                               | 252                            | 9.2 | 2440      | 89.4 | 1684                          | 9.3  | 16317     | 89.7 |
| Insurance company                      | 6                              | 6.7 | 83        | 92.2 | 39                            | 7.2  | 495       | 91.3 |
| Long term care                         | 139                            | 8.0 | 1577      | 90.8 | 178                           | 8.2  | 1966      | 90.9 |
| Mental health facility                 | 28                             | 9.8 | 253       | 88.2 | 77                            | 10.6 | 643       | 88.4 |
| Military base                          | 2                              | 3.3 | 58        | 95.1 | 21                            | 8.0  | 239       | 90.5 |
| Nursing education                      | 3                              | 2.5 | 104       | 88.1 | 47                            | 5.2  | 833       | 93.0 |
| Occupational health                    | 2                              | 2.6 | 74        | 97.4 | 14                            | 4.2  | 312       | 94.0 |
| Physician’s office                     | 66                             | 4.9 | 1277      | 94.4 | 111                           | 4.2  | 2501      | 94.6 |
| Public health/community                | 12                             | 5.4 | 208       | 93.3 | 65                            | 6.3  | 953       | 92.5 |
| School health                          | 13                             | 6.5 | 186       | 93.0 | 34                            | 3.2  | 1017      | 95.9 |
| Other settings                         | 36                             | 5.4 | 621       | 92.5 | 128                           | 5.5  | 2147      | 92.3 |

Note: Cases in which satisfaction or employment setting was missing are not included in this table.

A higher proportion of RNs and LPNs in clinical roles reported dissatisfaction with their current job compared to nurses in other types of work Roles (see Table 17). Because nurses are concentrated in clinical roles, their numbers also influence the results in Table 18 which shows that hospitals, long term care facilities, and mental health settings are the work places with the highest proportion of dissatisfied nurses. A national study of RN job satisfaction<sup>24</sup> also found that job satisfaction was lowest among RNs in hospitals and long term care settings. However, it is clear that the great majority of responding nurses in these settings, and in all the other settings, as well, report being satisfied with their job.

**Table 19. Virginia’s nursing workforce by length of time in current position**

| Tenure in current nursing position | LPNs in the Virginia Workforce |             | RNs in the Virginia Workforce |              |
|------------------------------------|--------------------------------|-------------|-------------------------------|--------------|
|                                    | #                              | %           | #                             | %            |
| Less than 6 months                 | 719                            | 8.3         | 2,522                         | 7.3          |
| 6 - 12 months                      | 963                            | 11.2        | 3,174                         | 9.2          |
| 1 – 2 years                        | 1,481                          | 17.2        | 5,290                         | 15.4         |
| 3 – 5 years                        | 2,049                          | 23.8        | 8,250                         | 24.0         |
| 5 - 10 years                       | 1,565                          | 18.1        | 7,124                         | 20.7         |
| More than 10 years                 | 1,770                          | 20.5        | 7,728                         | 22.5         |
| Unknown                            | 77                             | 0.9         | 290                           | 0.8          |
| <b>Totals</b>                      | <b>8,624</b>                   | <b>100%</b> | <b>34,378</b>                 | <b>99.9%</b> |

The length of time that responding nurses report being in their current job is reported in Table 19. About 19% of responding LPNs reported holding their current nursing position for a year or less. Among responding RNs that proportion was 16.5%. Contrary to assumptions that nurses turn over in their jobs fairly frequently, more

<sup>24</sup> The Registered Nurse Population: Findings from the March 2004 National Sample Survey of Registered Nurses. June, 2006. U.S. Dept. of Health and Human Services, Health Resources and Services Administration (HRSA)

than 20% of both LPNs and RNs responding to the Virginia workforce survey reported being in their current positions for more than 10 years. No relationship was found between job satisfaction and job tenure. Those on the job only a few months were just as likely to be satisfied (or dissatisfied) as those that had been in their job much longer.

### Expected Future Years in Nursing

The workforce survey asked nurses to estimate how much longer they expected to work in nursing. The results are reported in Table 20. Although there are some minor differences, the similarities between responding LPNs and RNs in the Virginia nursing workforce are striking. Recall that responding LPNs were slightly younger than RNs. This may account for the slight difference in the number of LPNs and RNs that reported planning to stay employed as nurses for more than the next 10 years.

The relationship between a nurse's age and the intention to leave the workforce earlier rather than later was explored in a separate analysis. There was a strong negative association between the two: younger nurses plan to stay longer and older nurses plan to leave earlier, but it is not a perfect association. For instance, approximately 11% of responding LPNs age 21 to 25 reported intending to leave the nursing workforce within the next five years. But 41% of those age 66 to 70 reported intending to practice for another 10 years or more. Similar exceptions to the pattern are seen among reporting RNs: about 14% age 26 to 30 reported expecting to leave the nursing workforce within the next five years, but about 30% of those age 66 to 70 reported intending to stay another five years or more.

**Table 20. Expected number of future years to be employed in nursing**

| Length of time to remain in the nursing workforce | LPNs in the Virginia Workforce |             | RNs in the Virginia Workforce |               |
|---|--------------------------------|-------------|-------------------------------|---------------|
|   | #                              | %           | #                             | %             |
| Less than 6 months                                | 48                             | 0.6         | 194                           | 0.6           |
| 6 to 12 months                                    | 112                            | 1.3         | 529                           | 1.5           |
| 1 to 2 more years                                 | 318                            | 3.7         | 1,343                         | 3.9           |
| 2 to 5 more years                                 | 950                            | 11.0        | 4,597                         | 13.4          |
| 5 to 10 more years                                | 1,867                          | 21.6        | 8,617                         | 25.1          |
| More than 10 years                                | 5,059                          | 58.7        | 18,083                        | 52.6          |
| Unknown   | 270                            | 3.1         | 1,015                         | 3.0           |
| <b>Totals</b>                                     | <b>8,624</b>                   | <b>100%</b> | <b>34,378</b>                 | <b>100.1%</b> |

To understand how the setting in which nurses work might influence their attachment to the nursing workforce Tables 21 and 22 cross reference employment setting with the length of time responding nurses reported intending to stay in the workforce. Table 21 is focused on LPNs. Table 22 is focused on RNs. These tables might also help identify specific settings that will be impacted more quickly or more severely by nurses planning to leave the workforce. For the sake of clarity in the tables, those nurses reporting planning to leave the workforce in less than six months, six months to one year, and one to two years have been collapsed into a single category.

Tables 21 and 22 should be read across the rows, rather than down the columns. Each row reports the proportion of nurses employed in that setting who plan to leave the workforce in each timeframe. The percentages in each row sum to 100% of the nurses employed in that setting, based on results from those

responding to the workforce survey. For example, 5.3% of the LPNs in hospitals reported that they expect to leave the nursing workforce within the next two years, and another 10.9% within the next five years.

An examination of Table 21 reveals that some settings are likely to see a larger exodus of their LPN workforce than others. Twenty-five percent of the LPNs employed in occupational health settings intend to leave the nursing workforce within the next five years. Public and community health sites, insurance companies and nursing education can also expect that about 21% of their LPN workforce will retire from the profession within the next five years.

**Table 21. LPNs expecting to leave the nursing workforce within a projected number of years by setting**

| Projected Years in Nursing for LPNS Currently in the Virginia Workforce |                 |     |             |      |              |      |                    |      |                         |     |       |
|---|-----------------|-----|-------------|------|--------------|------|--------------------|------|-------------------------|-----|-------|
| Current Job Setting   | 2 years or less |     | 3 – 5 years |      | 6 – 10 years |      | More than 10 years |      | Projected years unknown |     | Row N |
|   | #               | %   | #           | %    | #            | %    | #                  | %    | #                       | %   |       |
| Hospital  | 144             | 5.3 | 297         | 10.9 | 653          | 23.9 | 1561               | 57.2 | 73                      | 2.7 | 2,728 |
| Physician's office  | 57              | 4.2 | 140         | 10.3 | 287          | 21.2 | 841                | 62.2 | 28                      | 2.1 | 1,353 |
| Ambulatory care   | 14              | 4.4 | 45          | 14.3 | 88           | 27.9 | 153                | 48.6 | 15                      | 4.8 | 315   |
| Home health care  | 38              | 6.2 | 77          | 12.6 | 135          | 22.1 | 345                | 56.5 | 16                      | 2.6 | 611   |
| Long term care  | 101             | 5.8 | 164         | 9.4  | 293          | 16.9 | 1135               | 65.4 | 43                      | 2.5 | 1,736 |
| Public health/community   | 16              | 7.2 | 31          | 13.9 | 43           | 19.3 | 128                | 57.4 | 5                       | 2.2 | 223   |
| School health   | 8               | 4.0 | 30          | 15.0 | 48           | 24.0 | 110                | 55.0 | 4                       | 2.0 | 200   |
| Occupational health   | 7               | 9.2 | 12          | 15.8 | 18           | 23.7 | 35                 | 46.1 | 4                       | 5.3 | 76    |
| Mental health facility  | 23              | 8.0 | 28          | 9.8  | 56           | 19.5 | 164                | 57.1 | 16                      | 5.6 | 287   |
| Insurance company   | 6               | 6.6 | 13          | 14.4 | 28           | 31.1 | 42                 | 46.7 | 1                       | 1.1 | 90    |
| Nursing education   | 8               | 6.7 | 17          | 14.4 | 32           | 27.1 | 51                 | 43.2 | 10                      | 8.5 | 118   |
| Military base   | 1               | 1.6 | 11          | 18.0 | 16           | 26.2 | 32                 | 52.5 | 1                       | 1.6 | 61    |
| Other   | 41              | 6.1 | 74          | 11.0 | 134          | 20.0 | 392                | 58.4 | 30                      | 4.5 | 671   |

Note: The percentages in this table should be read across the row. The percentages in each row sum to 100%.

Because the RN workforce is slightly older – overall – than LPNs, a larger proportion of them expect to leave the workforce sooner. The percentages in Table 22 suggest that about 28% of the RN workforce currently employed in public/community health and school health sites plan to retire from the profession within the next five years. In nursing education the proportion of RNs that expect to leave within the next five years is 25%. Almost every other setting in which RNs are employed in Virginia can expect to lose about 20% of their current RN workforce to retirement within the next five years, some a little less, and some a little more. The notable exception is hospitals where only 17.2% of the current RN workforce indicated they plan to leave the workforce within the next five years.

**Table 22. RNs expecting to leave the nursing workforce within a projected number of years by setting**

| Projected Years in Nursing for RNs Currently in the Virginia Workforce |                 |     |             |      |              |      |                    |      |                         |      |        |
|--|-----------------|-----|-------------|------|--------------|------|--------------------|------|-------------------------|------|--------|
| Current Job Setting  | 2 years or less |     | 3 – 5 years |      | 6 – 10 years |      | More than 10 years |      | Projected years unknown |      | Row N  |
|  | #               | %   | #           | %    | #            | %    | #                  | %    | #                       | %    |        |
| Hospital   | 994             | 5.4 | 2148        | 11.8 | 4424         | 24.3 | 10140              | 55.8 | 480                     | 2.6  | 18,186 |
| Physician's office   | 158             | 6.0 | 355         | 13.4 | 641          | 24.2 | 1416               | 53.6 | 74                      | 2.8  | 2,644  |
| Ambulatory care  | 99              | 5.5 | 274         | 15.3 | 537          | 30.0 | 819                | 45.8 | 59                      | 3.3  | 1,788  |
| Home health care   | 120             | 6.5 | 248         | 13.4 | 443          | 23.9 | 1006               | 54.2 | 40                      | 2.2  | 1,857  |
| Long term care   | 129             | 6.0 | 246         | 11.4 | 466          | 21.5 | 1267               | 58.5 | 56                      | 2.6  | 2,164  |
| Public health/community  | 94              | 9.1 | 203         | 19.7 | 272          | 26.4 | 424                | 41.2 | 37                      | 3.6  | 1,030  |
| School health  | 84              | 7.9 | 202         | 19.1 | 297          | 28.0 | 447                | 42.2 | 30                      | 2.8  | 1,060  |
| Occupational health  | 22              | 6.6 | 60          | 18.1 | 112          | 33.7 | 124                | 37.3 | 14                      | 4.2  | 332    |
| Mental health facility   | 53              | 7.4 | 97          | 13.3 | 183          | 25.2 | 367                | 50.5 | 27                      | 3.7  | 727    |
| Insurance company  | 37              | 6.9 | 83          | 15.3 | 147          | 27.1 | 253                | 46.7 | 22                      | 4.1  | 542    |
| Nursing education  | 72              | 8.1 | 152         | 17.0 | 252          | 28.1 | 389                | 43.4 | 31                      | 3.5  | 896    |
| Military base  | 15              | 5.7 | 41          | 15.7 | 74           | 28.4 | 53                 | 20.3 | 78                      | 29.9 | 261    |
| Other settings   | 146             | 6.3 | 385         | 16.5 | 614          | 26.4 | 1102               | 47.4 | 80                      | 3.4  | 2,327  |

Note: The percentages in this table should be read across the row. The percentages in each row sum to 100%. Cases in which current job setting was missing are not included in this table.

### RNs in Advanced Practice Roles

It is difficult to determine a response rate for the different types of Advanced Practice RNs (APRNs) who responded to the workforce survey. As noted earlier in the "Study Methods" section of this report, the Virginia Board of Nursing requires that RNs practicing as nurse midwives, in anesthesia care, or under the title of Nurse Practitioner obtain an additional license beyond their RN license to practice. However, since Virginia is a member of the national nursing license compact, not all APRNs practicing in Virginia have access to the workforce survey. It is available only to those RNs renewing their Virginia RN license.

**Table 23. Comparison of APRNs licensed or registered in Virginia and workforce survey respondents**

| APRN Types                                    | Total # licensed or registered as an Advanced Practice RN in Virginia <sup>a</sup> | Total # identifying themselves in one or more APRN categories in the workforce survey |
|---|--|---|
| Certified Nurse Midwife (CNM)                 | 232  | 135   |
| Clinical Nurse Specialist (CNS)               | 445  | 739   |
| Nurse Practitioner (NP)                       | 4,003  | 2,088   |
| Certified Registered Nurse Anesthetist (CRNA) | 1,705  | 563   |
| <b>Number Totals</b>                          | <b>6,385<sup>a</sup></b>   | <b>3,525<sup>b</sup></b>  |

<sup>a</sup> These figures are taken from the 2008 statistical report published by the Virginia Board of Nursing

<sup>b</sup> Be aware that 3189 RNs identified themselves as a single type of advanced practice RN. Another 336 identified themselves with two or more advanced practice roles and as a result are double or even triple counted in this table. See Table 24 for additional information.

The first data column in Table 23 reports the number of APRNs holding a Virginia license to practice as a “Nurse Practitioner,” and the number of Clinical Nurse Specialists who have voluntarily registered with the state. The second data column reports the number of APRNs that hold an RN license in Virginia and also responded to the workforce survey. Note that the number of RNs identifying themselves as Clinical Nurse Specialists in the workforce survey far exceeds the number listed on Virginia’s CNS registry. This probably occurred for two reasons. First, the title of Clinical Nurse Specialist is often adopted by nurses who have developed extensive expertise in a given clinical area but who do not have a Master’s degree and/or certification in their clinical area. Second, listing on the registry for Master’s-educated Clinical Nurse Specialists is a voluntary action.

**Table 24. APRNs responding to the workforce survey by their role identity and active practice status**

| <b>APRN Types</b>                             | <b>Total #<br/>responding to<br/>the survey</b> | <b># of survey<br/>respondents<br/>reporting active<br/>practice</b> | <b>% of survey<br/>respondents<br/>reporting active<br/>practice</b> |
|---|---|--|--|
| Certified Nurse Midwife (CNM)                 | 109   | 57   | 52.3%  |
| Clinical Nurse Specialist (CNS)               | 606   | 323  | 53.3%  |
| Nurse Practitioner (NP)                       | 1,934   | 1,568  | 81.1%  |
| Certified Registered Nurse Anesthetist (CRNA) | 540   | 515  | 95.4%  |
| NP and CNM                                    | 23  | 20   | 87.0%  |
| NP and CNS                                    | 128   | 105  | 82.0%  |
| NP and CRNA                                   | 20  | 19   | 95.0%  |
| CNS and CNM                                   | 1   | 1  | 100.0%   |
| CNS and CRNA                                  | 1   | 1  | 100.0%   |
| NP, CNS and CNM                               | 1   | 1  | 100.0%   |
| NP, CNS, and CRNA                             | 1   | 0  | 0.0%   |
| NP, CNS, CNM and CRNA                         | 1   | 1  | 100.0%   |
| <b>Totals</b>                                 | <b>3,365</b>                                    | <b>2,611</b>   | <b>77.6%</b>   |

A further complication in understanding the APRN workforce in Virginia is that approximately 5% of those that responded to the workforce survey identify with two or more advanced practice roles (see Table 24). Also, the proportion of APRNs who reported to be actively in practice in an advanced practice role varied widely depending on specialty area. For APRNs who identified themselves with two or more advanced practice roles, it was not possible to discern further to what degree they were practicing in which roles.

The following tables examine the workforce behavior, work Role, job setting and job satisfaction for responding APRNs reporting to be in active practice within Virginia .

**Table 25. Full- or part-time employment status for practicing APRNs by their role identity**

| Employment status among Virginia's APRNs      | Reporting Employed full time |             | Reporting Employed part time |             | Work hours unknown |            | Row N        |
|---|------------------------------|-------------|------------------------------|-------------|--------------------|------------|--------------|
|   | #                            | %           | #                            | %           | #                  | %          |              |
| Certified Nurse Midwife (CNM)                 | 51                           | 89.5        | 6                            | 10.5        | 0                  | 0.0        | 57           |
| Clinical Nurse Specialist (CNS)               | 271                          | 83.9        | 49                           | 15.2        | 3                  | 0.9        | 323          |
| Nurse Practitioner (NP)                       | 1,282                        | 81.8        | 273                          | 17.4        | 13                 | 0.8        | 1,568        |
| Certified Registered Nurse Anesthetist (CRNA) | 433                          | 84.1        | 80                           | 15.5        | 2                  | 0.4        | 515          |
| NP and CNM                                    | 18                           | 90.0        | 2                            | 10.0        | 0                  | 0.0        | 20           |
| NP and CNS                                    | 91                           | 86.7        | 14                           | 13.3        | 0                  | 0.0        | 105          |
| NP and CRNA                                   | 18                           | 94.7        | 1                            | 5.3         | 0                  | 0.0        | 19           |
| CNS and CNM                                   | 1                            | 100         | 0                            | 0.0         | 0                  | 0.0        | 1            |
| CNS and CRNA                                  |                              | 0.0         | 1                            | 100         | 0                  | 0.0        | 1            |
| NP and CNS and CNM                            | 1                            | 100         | 0                            | 0.0         | 0                  | 0.0        | 1            |
| NP and CNS and CNM and CRNA                   | 1                            | 100         | 0                            | 0.0         | 0                  | 0.0        | 1            |
| <b>Totals</b>                                 | <b>2,167</b>                 | <b>83.0</b> | <b>426</b>                   | <b>16.3</b> | <b>18</b>          | <b>0.7</b> | <b>2,611</b> |

Note: The percentages in this table should be read across the row. The gray shades the cell counts to make the table easier to read. The percentages apply to the type of APRN defined in the row. The percents in each row sum to 100%.

Responding APRNs who reported they were in active practice in an advanced role were asked whether they were employed on a full-time basis (32 hours per week or more) or part-time (less than 32 hours per week). Although there is some variation by the type of advanced practice role, the results in Table 25 show that the great majority of responding APRNs reported being employed on a full-time basis. This table should be read across the row. Each row profiles the full- or part-time status of a particular type of advanced practice nurse. The percentages in each row sum to 100%.

**Table 26. Percent of Virginia's practicing APRNs in each work Role by their role identity**

| Work Roles of Virginia's APRNs                | Clinical     |             | Consultative / Regulatory |            | Education / Staff Development |            | Managerial / Administrative |            | Work environ unknown |            | Row N        |
|---|--------------|-------------|---------------------------|------------|-------------------------------|------------|-----------------------------|------------|----------------------|------------|--------------|
|   | #            | %           | #                         | %          | #                             | %          | #                           | %          | #                    | %          |              |
| Certified Nurse Midwife (CNM)                 | 50           | 87.7        | 0                         | 0.0        | 2                             | 3.5        | 5                           | 8.8        | 0                    | 0.0        | 57           |
| Clinical Nurse Specialist (CNS)               | 206          | 63.8        | 11                        | 3.4        | 47                            | 14.6       | 56                          | 17.3       | 3                    | 0.9        | 323          |
| Nurse Practitioner (NP)                       | 1,359        | 86.7        | 16                        | 1.0        | 75                            | 4.8        | 106                         | 6.8        | 12                   | 0.8        | 1,568        |
| Certified Registered Nurse Anesthetist (CRNA) | 464          | 90.1        | 2                         | 0.4        | 12                            | 2.3        | 31                          | 6.0        | 6                    | 1.2        | 515          |
| NP and CNM                                    | 16           | 80.0        | 0                         | 0.0        | 4                             | 20.0       | 0                           | 0.0        | 0                    | 0.0        | 20           |
| NP and CNS                                    | 90           | 85.7        | 2                         | 1.9        | 2                             | 1.9        | 10                          | 9.5        | 1                    | 1.0        | 105          |
| NP and CRNA                                   | 18           | 94.7        | 0                         | 0.0        | 0                             | 0.0        | 1                           | 5.3        | 0                    | 0.0        | 19           |
| CNS and CNM                                   | 1            | 100         | 0                         | 0.0        | 0                             | 0.0        | 0                           | 0.0        | 0                    | 0.0        | 1            |
| CNS and CRNA                                  | 1            | 100         | 0                         | 0.0        | 0                             | 0.0        | 0                           | 0.0        | 0                    | 0.0        | 1            |
| NP and CNS and CNM                            | 1            | 100         | 0                         | 0.0        | 0                             | 0.0        | 0                           | 0.0        | 0                    | 0.0        | 1            |
| NP and CNS and CNM and CRNA                   | 0            | 0.0         | 0                         | 0.0        | 0                             | 0.0        | 1                           | 100        | 0                    | 0.0        | 1            |
| <b>Totals</b>                                 | <b>2,206</b> | <b>84.5</b> | <b>31</b>                 | <b>1.2</b> | <b>142</b>                    | <b>5.4</b> | <b>210</b>                  | <b>8.0</b> | <b>22</b>            | <b>0.8</b> | <b>2,611</b> |

Note: The numbers in this table should be read across the row. The gray shades the cell counts to make the table easier to read. The percentages apply to the APRNs defined in the row. The percents in each row sum to 100%.

The reported work of responding APRNs appears to have occurred primarily in clinical Roles. But many APRNs were found in other types of work Roles. Table 26 illustrates the types of work roles in which responding APRNs reported to be practicing in Virginia. The percentages in this table should be read across the row. For example, 87.7% of responding Certified Nurse Midwives reported practice in a clinical Role, but 8.8% of them reported they were in managerial or administrative Roles. Each row in Table 26 sums to 100%.

Responding APRNs also reported they worked in a wide variety of employment settings. The 2007-2008 workforce survey asked nurses to choose from among 13 different types of settings to describe the location of their current job. Table 27 has been split into two separate tables in order to make the tables easier to read and to accommodate all of the setting choices. These tables should be read across the row, because the rows report the percentage of a specific APRN type employed in each setting. Be aware that, in this instance, the row extends across the two tables: A and B. For example, 38.6% of Certified Nurse Midwives practice in hospital settings (see Table 27a), 15.8% in physician offices and 8.8% in public health or community health centers (see Table 27b). When combined together across the two tables, each row sums to 100%.

**Table 27a. Percentage of Virginia’s practicing APRNs in each employment setting by their role identity**

| Employment Settings for Virginia’s APRNs | Ambulatory care |            | Home health care |            | Hospitals   |             | Insurance company |            | Long term care |            | Mental health facility |            | Military base |            |
|--|-----------------|------------|------------------|------------|-------------|-------------|-------------------|------------|----------------|------------|------------------------|------------|---------------|------------|
|  | #               | %          | #                | %          | #           | %           | #                 | %          | #              | %          | #                      | %          | #             | %          |
| Certified Nurse Midwife (CNM)            | 3               | 5.3        | 1                | 1.8        | 22          | 38.6        | 0                 | 0.0        | 2              | 3.5        | 0                      | 0.0        | 2             | 3.5        |
| Clinical Nurse Specialist (CNS)          | 17              | 5.3        | 12               | 3.7        | 155         | 48.0        | 9                 | 2.8        | 14             | 4.3        | 12                     | 3.7        | 4             | 1.2        |
| Nurse Practitioner (NP)                  | 162             | 10.3       | 41               | 2.6        | 519         | 33.1        | 11                | 0.7        | 87             | 5.5        | 29                     | 1.8        | 24            | 1.5        |
| Certified RN Anesthetist (CRNA)          | 42              | 8.2        | 18               | 3.5        | 337         | 65.4        | 2                 | 0.4        | 20             | 3.9        | 8                      | 1.6        | 4             | 0.8        |
| NP and CNM                               | 2               | 10.0       | 0                | 0.0        | 4           | 20.0        | 0                 | 0.0        | 1              | 5.0        | 0                      | 0.0        | 1             | 5.0        |
| NP and CNS                               | 9               | 8.6        | 3                | 2.9        | 36          | 34.3        | 0                 | 0.0        | 6              | 5.7        | 5                      | 4.8        | 3             | 2.9        |
| NP and CRNA                              | 3               | 15.8       | 0                | 0.0        | 16          | 84.2        | 0                 | 0.0        | 0              | 0.0        | 0                      | 0.0        | 0             | 0.0        |
| CNS and CNM                              | 0               | 0.0        | 0                | 0.0        | 1           | 100         | 0                 | 0.0        | 0              | 0.0        | 0                      | 0.0        | 0             | 0.0        |
| CNS and CRNA                             | 0               | 0.0        | 0                | 0.0        | 1           | 100         | 0                 | 0.0        | 0              | 0.0        | 0                      | 0.0        | 0             | 0.0        |
| NP and CNS and CNM                       | 1               | 100        | 0                | 0.0        | 0           | 0.0         | 0                 | 0.0        | 0              | 0.0        | 0                      | 0.0        | 0             | 0.0        |
| NP and CNS and CNM and CRNA              | 0               | 0.0        | 0                | 0.0        | 1           | 100         | 0                 | 0.0        | 0              | 0.0        | 0                      | 0.0        | 0             | 0.0        |
| <b>Totals</b>                            | <b>239</b>      | <b>9.2</b> | <b>75</b>        | <b>2.9</b> | <b>1092</b> | <b>41.8</b> | <b>22</b>         | <b>0.8</b> | <b>130</b>     | <b>5.0</b> | <b>54</b>              | <b>2.1</b> | <b>38</b>     | <b>1.5</b> |

Note: The numbers in this table should be read across the row. The gray shades the cell counts to make the table easier to read. The percentages apply to the APRNs defined in the row. The percents in each row, across table sections A and B, sum to 100%.

With the exception of Certified Registered Nurse Anesthetists, most responding APRNs in Virginia reported that they did not work in hospitals but rather a variety of community-based care settings, as can be seen in Tables 27a and 27b. Many of the APRNs who indicated their primary practice setting as “other” were actually in private practices with other APRNs who share their specialty or were self-employed. Several Certified Nurse Midwives who checked the “other” option indicated they work in midwifery centers – a category missing from the options in the questionnaire.

**Table 27b. Percentage of Virginia's practicing APRNs in each employment setting by their role identity**

| Employment Settings for Virginia's APRNs | Nursing education |            | Occupational health |            | Physician office |             | Public / community health |            | School health |            | All other settings |            | Setting unknown |            | Row N        |
|--|-------------------|------------|---------------------|------------|------------------|-------------|---------------------------|------------|---------------|------------|--------------------|------------|-----------------|------------|--------------|
|  | #                 | %          | #                   | %          | #                | %           | #                         | %          | #             | %          | #                  | %          | #               | %          |              |
| Certified Nurse Midwife (CNM)            | 2                 | 3.5        | 0                   | 0.0        | 9                | 15.8        | 5                         | 8.8        | 1             | 1.8        | 10                 | 17.5       | 0               | 0.0        | 57           |
| Clinical Nurse Specialist (CNS)          | 24                | 7.4        | 4                   | 1.2        | 21               | 6.5         | 13                        | 4.0        | 2             | 0.6        | 31                 | 9.6        | 5               | 1.5        | 323          |
| Nurse Practitioner (NP)                  | 47                | 3.0        | 24                  | 1.5        | 388              | 24.7        | 64                        | 4.1        | 27            | 1.7        | 118                | 7.5        | 27              | 1.7        | 1,568        |
| Certified RN Anesthetist (CRNA)          | 7                 | 1.4        | 1                   | 0.2        | 34               | 6.6         | 5                         | 1.0        | 8             | 1.6        | 24                 | 4.7        | 5               | 1.0        | 515          |
| NP and CNM                               | 4                 | 20.0       | 0                   | 0.0        | 7                | 35.0        | 1                         | 5.0        | 0             | 0.0        | 0                  | 0.0        | 0               | 0.0        | 20           |
| NP and CNS                               | 3                 | 2.9        | 1                   | 1.0        | 20               | 19.0        | 5                         | 4.8        | 3             | 2.9        | 11                 | 10.5       | 0               | 0.0        | 105          |
| NP and CRNA                              | 0                 | 0.0        | 0                   | 0.0        | 0                | 0.0         | 0                         | 0.0        | 0             | 0.0        | 0                  | 0.0        | 0               | 0.0        | 19           |
| CNS and CNM                              | 0                 | 0.0        | 0                   | 0.0        | 0                | 0.0         | 0                         | 0.0        | 0             | 0.0        | 0                  | 0.0        | 0               | 0.0        | 1            |
| CNS and CRNA                             | 0                 | 0.0        | 0                   | 0.0        | 0                | 0.0         | 0                         | 0.0        | 0             | 0.0        | 0                  | 0.0        | 0               | 0.0        | 1            |
| NP and CNS and CNM                       | 0                 | 0.0        | 0                   | 0.0        | 0                | 0.0         | 0                         | 0.0        | 0             | 0.0        | 0                  | 0.0        | 0               | 0.0        | 1            |
| NP and CNS and CNM and CRNA              | 0                 | 0.0        | 0                   | 0.0        | 0                | 0.0         | 0                         | 0.0        | 0             | 0.0        | 0                  | 0.0        | 0               | 0.0        | 1            |
| <b>Totals</b>                            | <b>87</b>         | <b>3.3</b> | <b>30</b>           | <b>1.1</b> | <b>479</b>       | <b>18.3</b> | <b>93</b>                 | <b>3.6</b> | <b>41</b>     | <b>1.6</b> | <b>194</b>         | <b>7.4</b> | <b>37</b>       | <b>1.4</b> | <b>2,611</b> |

Note: The numbers in this table should be read across the row. The gray shades the cell counts to make the table easier to read. The percentages apply to the APRNs defined in the row. The percents in each row, across table sections A and B, sum to 100%.

Job satisfaction is another aspect of employment that was examined for advanced practice RNs actively practicing within Virginia. In general, job satisfaction among the state's responding APRNs was reported to be very high. See Table 28 for the percentage of APRNs who reported they were dissatisfied or satisfied in their current position. Job satisfaction among APRNs was also examined by job setting (see Table 29). In this case all APRNs were combined together rather than broken out by their role identities in order to clarify which settings had the highest and lowest overall levels of satisfaction for all APRNs employed in those settings.

**Table 28. Job satisfaction among Virginia's practicing APRNs by their role identity**

| Job Satisfaction among Virginia's APRNs | Very dissatisfied |            | Somewhat dissatisfied |            | Somewhat satisfied |             | Very satisfied |             | Satisfaction not reported |            | Row N        |
|---|-------------------|------------|-----------------------|------------|--------------------|-------------|----------------|-------------|---------------------------|------------|--------------|
|   | #                 | %          | #                     | %          | #                  | %           | #              | %           | #                         | %          |              |
| Certified Nurse Midwife (CNM)           | 1                 | 1.8        | 2                     | 3.5        | 16                 | 28.1        | 38             | 66.7        | 0                         | 0.0        | 57           |
| Clinical Nurse Specialist (CNS)         | 5                 | 1.5        | 11                    | 3.4        | 98                 | 30.3        | 205            | 63.5        | 4                         | 1.2        | 323          |
| Nurse Practitioner (NP)                 | 19                | 1.2        | 75                    | 4.8        | 479                | 30.5        | 974            | 62.1        | 21                        | 1.3        | 1568         |
| Certified RN Anesthetist (CRNA)         | 5                 | 1.0        | 17                    | 3.3        | 147                | 28.5        | 336            | 65.2        | 10                        | 1.9        | 515          |
| NP and CNM                              | 0                 | 0.0        | 0                     | 0.0        | 6                  | 30.0        | 14             | 70.0        | 0                         | 0.0        | 20           |
| NP and CNS                              | 2                 | 1.9        | 3                     | 2.9        | 34                 | 32.4        | 65             | 61.9        | 1                         | 1.0        | 105          |
| NP and CRNA                             | 0                 | 0.0        | 2                     | 10.5       | 8                  | 42.1        | 9              | 47.4        | 0                         | 0.0        | 19           |
| CNS and CNM                             | 0                 | 0.0        | 0                     | 0.0        | 0                  | 0.0         | 1              | 100         | 0                         | 0.0        | 1            |
| CNS and CRNA                            | 0                 | 0.0        | 0                     | 0.0        | 0                  | 0.0         | 1              | 100         | 0                         | 0.0        | 1            |
| NP and CNS and CNM                      | 0                 | 0.0        | 0                     | 0.0        | 0                  | 0.0         | 1              | 100         | 0                         | 0.0        | 1            |
| NP and CNS and CNM and CRNA             | 0                 | 0.0        | 0                     | 0.0        | 0                  | 0.0         | 1              | 100         | 0                         | 0.0        | 1            |
| <b>Totals</b>                           | <b>32</b>         | <b>1.2</b> | <b>110</b>            | <b>4.2</b> | <b>788</b>         | <b>30.2</b> | <b>1645</b>    | <b>63.0</b> | <b>36</b>                 | <b>1.4</b> | <b>2,611</b> |

Note: The numbers in this table should be read across the row. The gray shades the cell counts to make the table easier to read. The percentages apply to the APRNs defined in the row. The percents in each row sum to 100%.

**Table 29. Job satisfaction levels for all actively practicing APRNs by primary job setting**

| All Actively Practicing APRNs          |                   |            |                       |            |                    |             |                |             |                           |            |              |
|--|-------------------|------------|-----------------------|------------|--------------------|-------------|----------------|-------------|---------------------------|------------|--------------|
| Job Satisfaction by Employment Setting | Very dissatisfied |            | Somewhat dissatisfied |            | Somewhat Satisfied |             | Very satisfied |             | Satisfaction not reported |            | Row N        |
|  | #                 | %          | #                     | %          | #                  | %           | #              | %           | #                         | %          |              |
| Hospital                               | 15                | 1.4        | 57                    | 5.2        | 368                | 33.7        | 638            | 58.4        | 14                        | 1.3        | 1092         |
| Physician's office                     | 4                 | 0.8        | 11                    | 2.3        | 113                | 23.6        | 348            | 72.7        | 3                         | 0.6        | 479          |
| Ambulatory care                        | 2                 | 0.8        | 11                    | 4.6        | 58                 | 24.3        | 163            | 68.2        | 5                         | 2.1        | 239          |
| Home health care                       | 4                 | 5.3        | 0                     | 0.0        | 31                 | 41.3        | 39             | 52.0        | 1                         | 1.3        | 75           |
| Long term care                         | 1                 | 0.8        | 8                     | 6.2        | 44                 | 33.8        | 75             | 57.7        | 2                         | 1.5        | 130          |
| Public health/community                | 0                 | 0.0        | 2                     | 2.2        | 30                 | 32.3        | 60             | 64.5        | 1                         | 1.1        | 93           |
| School health                          | 1                 | 2.4        | 1                     | 2.4        | 12                 | 29.3        | 27             | 65.9        | 0                         | 0.0        | 41           |
| Occupational health                    | 0                 | 0.0        | 1                     | 3.3        | 12                 | 40.0        | 17             | 56.7        | 0                         | 0.0        | 30           |
| Mental health facility                 | 1                 | 1.9        | 4                     | 7.4        | 19                 | 35.2        | 30             | 55.6        | 0                         | 0.0        | 54           |
| Insurance company                      | 0                 | 0.0        | 1                     | 4.5        | 11                 | 50.0        | 10             | 45.5        | 0                         | 0.0        | 22           |
| Nursing education                      | 0                 | 0.0        | 2                     | 2.3        | 23                 | 26.4        | 61             | 70.1        | 1                         | 1.1        | 87           |
| Military base                          | 2                 | 5.3        | 0                     | 0.0        | 13                 | 34.2        | 22             | 57.9        | 1                         | 2.6        | 38           |
| Other                                  | 1                 | 0.5        | 8                     | 4.1        | 45                 | 23.2        | 132            | 68.0        | 8                         | 4.1        | 194          |
| Setting unknown                        | 1                 | 2.7        | 4                     | 10.8       | 9                  | 24.3        | 23             | 62.2        | 0                         | 0.0        | 37           |
| <b>Totals</b>                          | <b>32</b>         | <b>1.2</b> | <b>110</b>            | <b>4.2</b> | <b>788</b>         | <b>30.2</b> | <b>1645</b>    | <b>63.0</b> | <b>36</b>                 | <b>1.4</b> | <b>2,611</b> |

Note: The numbers in this table should be read across the row. The percentages apply to the APRNs defined in the row. The percents in each row sum to 100%.

The results in Table 29 show that, across all settings, only a small percentage of APRNs reported being somewhat or very dissatisfied in their current position: 5.4% (1.2% + 4.2%). A few settings have slightly higher proportions of APRNs who reported being dissatisfied (i.e., hospitals, long term care, mental health facilities). However, be aware that the numbers in both 'dissatisfied' columns are very small, and thus highly volatile. In all but one setting, more than half of all APRNs employed in those settings reported being very satisfied with their current position, suggesting that APRNs were well integrated into their respective employment settings.

## Conclusions

The initial effort by the Virginia Board of Nursing to obtain information about the workforce behavior of nurses in the state has provided some very valuable information. It is now known that the great majority of LPNs (81%) and RNs (82%) licensed by the state of Virginia reported to be actively engaged in the nursing workforce; that more than 70% reported being employed within the Commonwealth; and that most of them (LPNs: 84%, RNs: 81%) reported that they were employed full-time. It is also possible to describe how responding LPNs and RNs reported being deployed across various healthcare settings and roles within Virginia. The nursing workforce survey results from 2007-2008 provided a profile of the demographic characteristics of the responding nursing workforce which addressed such factors as: age, race, gender and education, all of which has been shown to affect workforce attachment and behaviors, and thus is of value to workforce planners and policy makers. Finally, the 2007-2008 survey also provided some general information about the overall level of job satisfaction within the workforce, and roughly what proportions plan to leave or stay in the workforce over the next 10 years. This type of information can highlight sectors of the healthcare industry in Virginia that might be vulnerable to disruptions in their nursing labor force.

Although differences exist in survey methodologies, in many instances it was possible to compare Virginia's nursing reported workforce characteristics to national profiles of RNs and LPNs. Virginia's survey participants

had a higher proportion of Black RNs than those in the national workforce. In Virginia the responding RN workforce in 2007-2008 was slightly older than the LPN workforce, which is the reverse of how these nursing groups look at the national level. A greater proportion of the responding RN workforce in Virginia reported being employed full-time, compared to the national profile. It is not possible currently to determine whether this trend will continue because recent economic issues may account for some or all of that difference. One way in which the responding Virginia's RN workforce may be similar to the national RN workforce is in the way these responding nurses reported being deployed across workforce settings, and in how their reported level of job satisfaction related to their work setting.

A large body of research has shown that job satisfaction is related to turnover and to an exodus from the nursing workforce. Age is also a factor in the decision to leave the workforce. Both the age profile of Virginia nurses and the length of time nurses reported intending to stay in the workforce suggest that the healthcare industry in Virginia might expect to lose 20%-25% of the current nurse workforce over the next five years. As the nursing workforce grows older, and the baby-boom generation reaches retirement age, workforce and succession planning will become increasingly important.

Although this first round of information is valuable for understanding how nurses are deployed across the workforce in Virginia, successive surveys in future years will allow Virginia to track changes in both the nursing workforce and changes in the way nurses are being used within the healthcare system. Such information will allow workforce planners to better anticipate shortages, give policy makers the information they need to craft innovative and effective interventions, and allow legislators and other government agencies to target scarce resources for the largest impact.

Recommendations for Improvements for the new nursing workforce renewal survey were adopted by the Nursing Workforce Committee and Advisory Council. They are provided for general reference in the Appendix and have been incorporated into the new 2010-2011 survey instrument. The recommendations for improvement, 2007-2008 and 2010-2011 surveys are in the Appendix to this report.

## Appendix

Recommendations for Future Nurse Workforce Surveys

Nursing Workforce Survey Instrument for 2007-2008

Revised Nursing Workforce Survey Instrument for 2010-11

## Recommendations for Future Nurse Workforce Surveys

The workforce survey used in 2007 and 2008 and the data generated through that survey could be improved in the following ways:

- Some questions, such as the type of entry-level education program and year a nurse graduates is something that never changes. It can be collected as part of the initial application for licensure and made a part of the administrative database. Gender, race, birth year, and state of initial licensure would be additional examples of such constant characteristics. However, this strategy requires that administrative information be linked to a nurse's survey responses through some type of unique identifier residing in both databases. This can be done while still protecting the confidentiality of both data sources.
- Making most of the questions in the workforce survey a required part of the license renewal process would result in a 100% participation rate. That, in turn, would allow analysts to accurately estimate the true size of the nursing workforce in Virginia in terms of full-time equivalent (FTE) employees. A 100% participation rate would also permit an accurate estimation of unemployment rates among nurses, and reliable regional analyses of the supply of nurses across Virginia. Having that type of information, and trending changes over time, will provide valuable information about how the dynamics of both the labor force and the work place for nurses is changing in Virginia.
- Require nurses who have both an active RN license and an active LPN license to declare which license they are working under.
- Clarify the definition of what constitutes employment 'in nursing' or 'outside of nursing' so that all nurses are using the same criteria. Given the wide range of jobs and roles for nurses (many of which do not involve direct patient care, but do require nursing knowledge), any job requiring an active license to practice as a nurse should constitute employment in nursing.
- To get an accurate estimate of the nursing workforce in terms of FTEs, nurses should report the total hours worked per week in a typical week – or volunteered in the case of unpaid volunteers. In some states as many as 20% of nurses practice in multiple nursing positions. The current measure of hours worked is inadequate to capture these additional hours invested in the community by nurses.
- The nursing workforce is very broad in terms of where and how nurses practice. In order to understand what proportion of the nursing workforce is dedicated to direct patient care, a question is needed to capture this information. This will provide critical information needed by workforce planners for forecasting the supply of nurses, as well as constructing accurate demand models.
- A clear question to address whether or not a nurse is employed within the state of Virginia is needed. Inference based on work location information (currently practice location zip code) is not the best way to address this critical piece of information.
- Practice location information is important in order to understand where nurses are employed. Zip code alone is insufficient and may not be the best location indicator. Zip codes cross county and city boundaries and change over time. City and county location would be a better choice. If GPS mapping is desired, then street addresses will also be needed.
- In questions pertaining to advanced practice RNs, define what constitutes an advanced practice role (i.e. education, certification) so that every nurse is using the same definition.
- For advanced practice RNs prepared in more than one advanced practice role, clarify which of those roles are currently being practiced so that an accurate count of the APRN workforce can be made.

## Nursing Workforce Survey Instrument for 2007-2008

### Question and Answer Choices Nursing Workforce Survey 2007 and 2008

| Question Text  | Answer Choices                                |
|--|---|
| 1. What is your level of licensure? (Select one)   | Dropdown:                                     |
|  | LPN   |
|  | RN  |
|  | Both LPN & RN                                 |
| 2.a. What was your entry into practice as a nurse? (Select one of the following types of Programs) | Dropdown:                                     |
|  | LPN Diploma/Certificate                       |
|  | RN Diploma                                    |
|  | Associate Degree, Nursing                     |
|  | Associate Degree, Other                       |
|  | Baccalaureate Degree, Nursing                 |
|  | Baccalaureate Degree, Other                   |
| 2.b. Year graduated from the type of program   | Fill in the blank                             |
| 3.a. What is your highest degree? (Select One)   | Dropdown:                                     |
|  | LPN Diploma/Certificate                       |
|  | RN Diploma                                    |
|  | Associate Degree, Nursing                     |
|  | Associate Degree, Other                       |
|  | Baccalaureate Degree, Nursing                 |
|  | Baccalaureate Degree, Other                   |
|  | Master's Degree, Nursing                      |
|  | Master's Degree, Other                        |
|  | Doctoral Degree, Nursing                      |
|  | Doctoral Degree, Other                        |
| 3.b. Year graduated  | Fill in the blank                             |
| 4.a. Are you an advanced practice nurse?   | Yes/No dropdown                               |
| 4.b. If yes, check all Advanced practice educational programs completed.                           | Nurse Practitioner (NP)                       |
|  | Clinical Nurse Specialist (CNS)               |
|  | Certified Nurse Midwife                       |
|  | Certified Registered Nurse Anesthetist (CRNA) |
| 4.c. Are you practicing in the advanced practice role?   | Yes/No dropdown.                              |
| 5. Year you were first licensed in nursing anywhere:   | Fill in the blank                             |
| 6. Year you were first licensed in nursing in Virginia:  | Fill in the blank                             |
| 7. Select the group you most identify yourself with:   | Dropdown:                                     |

|  |  |
|--|--|
|  | White, not of Hispanic origin                                |
|  | Black, not of Hispanic origin                                |
|  | Hispanic   |
|  | American Indian/Alaskan Native                               |
|  | Asian/Pacific Islander                                       |
|  | Multi-racial   |
|  | Other  |
|  |  |
| 8. Select your gender  | Dropdown:  |
|  | Male   |
|  | Female   |
|  |  |
| 9. Birth month and year  | Fill in the blank  |
|  |  |
| 10. Select one option that describes your current employment status                        | Dropdown:  |
|  | Employed in Nursing  |
|  | Employed in another field other than Nursing                 |
|  | Seeking Nursing employment                                   |
|  | Temporarily not working and not looking for a job in nursing |
|  | Retired or with no plans to return to work in nursing        |
|  |  |
| 11. Select one that best describes the hours you work at your primary place of employment. | Dropdown:  |
|  | Employed 32 hours/week or more in nursing                    |
|  | Employed less than 32 hours/week in nursing                  |
|  | Employed 32 hours/week or more outside of nursing            |
|  | Employed less than 32 hours/week outside of nursing          |
|  | Not employed/not employed in nursing (go to Question 18)     |
|  |  |
| 12. Select one area that best describes your primary work environment.                     | Dropdown:  |
|  | Clinical   |
|  | Managerial/Administrative                                    |
|  | Education/Staff Development                                  |
|  | Consultative/Regulatory                                      |
|  |  |
| 13.a. Select one setting that best describes your primary nursing employment.              | Dropdown:  |
|  | Hospital   |
|  | Ambulatory Care  |
|  | Long Term Care   |
|  | Public health/community                                      |
|  | Occupational health  |
|  | Insurance company  |
|  | Home health care   |
|  | Nursing education  |
|  | School health  |
|  | Mental health facility                                       |
|  | Physician's office   |
|  | Military Base  |
|  | Other  |

|  |   |
|--|---|
| 13.b. If Other, please specify:  | Fill in the blank                                       |
| 14. How long have you been in your current position?   | Dropdown:   |
|  | Less than six months                                    |
|  | Six months to Twelve Months                             |
|  | Thirteen months to twenty-four months(one to two years) |
|  | Twenty-five months to Sixty months (two to five years)  |
|  | Sixty-one months to 120 months (five to ten years)      |
|  | More than 120 months (more than ten years)              |
| 15.a. Please indicate the 5 digit U.S. zip code for the location of your primary employment position:  | Fill in the blank                                       |
| 15.b. Check if employed outside the U.S.   | Employed outside the U.S.                               |
| 16. Overall, how satisfied are you with your present job in nursing?                                   | Dropdown:   |
|  | Very satisfied  |
|  | Somewhat satisfied                                      |
|  | Somewhat dissatisfied                                   |
|  | Very dissatisfied                                       |
| 17. How much longer do you plan on working in nursing?   | Dropdown:   |
|  | Less than 6 months                                      |
|  | 6 months to 12 months (1 more year)                     |
|  | 13 months to 24 months (1 to 2 more years)              |
|  | 25 months to 60 months (2 to 5 more years)              |
|  | 61 months to 120 months (5 to 10 more years)            |
|  | More than 120 months (more than 10 years)               |
| PLEASE NOTE: Question 18.a. and 18.b. only apply to you if you answered "not employed" to Question 11. | NO RESPONSE   |
| 18.a. Do you plan on seeking employment in nursing?  | Yes/No dropdown   |
| 18.b. If yes, select one that applies:   | Dropdown:   |
|  | Within 6 months   |
|  | Within 6 months to 12 months (1 more year)              |
|  | Within 13 months to 24 months (1 to 2 more years)       |
|  | Within 25 months to 60 months (2 to 5 more years)       |
|  | Within 61 months to 120 months (5 to 10 more years)     |
|  | Within more than 120 months (more than 10 years)        |
| 19. Are you currently enrolled in a nursing education program leading to an advanced degree?           | Yes/No dropdown   |

## Revised Nursing Workforce Survey Instrument for 2010-11

| Question and Answer Choices Revised Nursing Workforce Survey   |   |
|--|---|
| Question Text  | Answer Choices  |
| 1 Please list the date of your birth.  | Fill-in (4 digit year with error parameters)  |
| 2 Please select your sex/gender.   | Dropdown: Male, Female and if no answer is given, populate with "Unknown"   |
| 3 Please select the menu item that best describes your ethnicity/race.   | Drop-down with list given, and populate with "Unknown" if no answer is given.<br>White (Non-Hispanic) / Caucasian<br>Black / African American (Non-Hispanic)<br>Hispanic / Latino (Puerto Rican)<br>Asian / Pacific Islander<br>American Indian / Alaska Native<br>Two or More Races<br>Other: _____  |
| 4 In the USA, in what state do you currently reside?   | Drop down of states, DC, and then<br>Other: Fill-in   |
| 5 Are you currently a resident of Virginia?  | Dropdown: Yes or No   |
| 6 If you answered yes, please provide your City/County and zip code information:   | Dropdown: City/County of residence<br>(Listing of VA Cities and Counties)<br>Fill-in: Zip Code: Fill-in   |
| 7 Were you ever employed in any of the following health-related jobs <u>before</u> completing your initial nursing education program? (Check all that apply) | Dropdown<br><br>No health related position<br>Nursing Aide/Nursing Assistant<br>Home health aide/assistant<br>Licensed Practical Nurse (for RNs)<br>Emergency Medical Technician/Paramedic<br>Medical Assistant<br>Dental Assistant<br>Allied Health Technician/Technologist<br>Manager in health care setting<br>Military Medical Corp<br>Medical Doctor<br>Midwife<br>Other: Fill-In: |
| 8 In what country did you receive your most recent nursing education?  | Drop down of states, DC, Territories, major Countries and then<br>Other: Fill-in  |
| 9 If your answer was the USA, then which state?  | Drop down of states, DC, and then<br>Other: Fill-in   |
| 10 Please indicate <u>all</u> post high school degrees you have received.  | Dropdown<br>Associate Degree<br>Bachelor's Degree<br>Master's Degree<br>Doctorate<br>Other: (specify)   |
| 11 How did you finance your <u>initial</u> nursing education.  | Dropdown<br>Healthcare employment earnings<br>Non healthcare employment earnings<br>Personal savings<br>Family Resources<br>Employer tuition reimbursement  |

- Veterans benefits  
Federal traineeships, scholarships, or grant  
Federal loans  
Other type of loan  
State/local government scholarship or grant  
Non governmental scholarship or grant  
Other resources
- 12 In your initial nursing education program, were you a part-time or full-time student?  
Dropdown  
Full-time  
Part-time
- 13 What is the highest nursing certificate, diploma, or degree you have received as of today? (Choose only the highest.)  
Dropdown  
LPN Diploma/Certificate  
RN Diploma  
Associate Degree  
Baccalaureate Degree  
Master's degree  
Doctorate in Nursing  
Doctorate in Nursing Science  
Doctorate in Nursing Practice  
Doctor of Philosophy in Nursing
- 14 In your answer above, what was the year of your graduation?  
Fill-in:
- 15 What type of nursing degree / credential qualified you for your first license in the USA? (Choose only one.)  
Dropdown  
LPN diploma or certificate  
Hospital RN diploma  
Associate degree in nursing  
Baccalaureate degree in nursing  
Master's degree in nursing  
Doctoral degree in nursing
- 16 What is the highest level of non-nursing education you have attained to date? (Choose the highest education you have completed as of today.)  
Dropdown  
High School diploma or GED  
Associate's degree  
Baccalaureate degree  
Master's degree  
Doctorate
- 17 Are you currently enrolled in a nursing education program leading to an advanced degree?  
Dropdown: Yes or No
- 18 In what state were you issued your first nursing license/certificate?  
Drop down of states, DC, territories and then  
Other: Fill-in
- 19 In what year were you issued your first nursing license?  
Fill-in (4 digit year with error parameters)
- 20 Which type of nursing degree or nursing credential qualified you for your first license? (Mark only one.)  
Dropdown  
Diploma Program  
Associate Degree  
Bachelor's Degree  
Master's Degree  
Doctorate  
Other: Fill-In
- 21 In what year did you complete this nursing program?  
Fill-In
- 22 In which state (including the District of Columbia), US territory or foreign country was this program located?  
Dropdown: Listing of states, territories, and major countries. Then  
Other: Fill-In

- 23 Indicate the type of nursing license you currently hold:  
(Choose all that apply.) Note: All Advance Practice nurses should select Active or Inactive RN.
- 24 If you currently hold both an active RN license and an active LPN license, please indicate which license you are practicing under at this time: (Choose only one)
- 25 **Nurse Practitioners:** Are you currently licensed by the state of Virginia as a "Nurse Practitioner"?
- 26 If you answered yes, please indicate the type of role for which you are licensed in Virginia. (Choose all that apply.)
- 27 **Clinical Nurse Specialists:** Are you currently registered with the Virginia Board of Nursing as a Clinical Nurse Specialist?
- Employment Status**
- 28 What is your current employment status? (Choose the response that best fits your situation.)
- 29 How many paid positions do you currently hold as a nurse?
- Dropdown
- Active RN license
- Inactive RN license
- Active LPN license
- Inactive LPN license
- Dropdown
- Practicing as an RN
- Practicing as an LPN
- Currently not practicing as a nurse
- Dropdown: Yes or No
- Dropdown:
- Certified Nurse Midwife
- Certified Registered Nurse Anesthetist
- Nurse Practitioner - Acute Care
- Nurse Practitioner - Adult
- Nurse Practitioner - Emergency Room
- Nurse Practitioner - Family
- Nurse Practitioner - Family Planning
- Nurse Practitioner - Geriatric
- Nurse Practitioner - Medical
- Nurse Practitioner - Neonatal
- Nurse Practitioner - OB/GYN
- Nurse Practitioner - Pediatric
- Nurse Practitioner - Psychiatric and Mental Health
- Nurse Practitioner - Women's Health
- Licensed in multiple advanced practice roles
- Dropdown: Yes or No
- Dropdown
- Actively employed in nursing - full time
- Actively employed in nursing - part time
- Actively employed in nursing - per diem
- Working in nursing only as a volunteer
- Actively employed in a field other than nursing - full time
- Actively employed in a field other than nursing - part time
- Actively employed in a field other than Nursing - per diem
- Unemployed - seeking work as a nurse
- Unemployed - not seeking work as a nurse
- Out of the workforce temporarily
- Disabled
- Retired
- Please Note: If you are employed in a non-nursing position, unemployed, retired, or disabled, please skip the following employment questions. GO to Question 42.**
- Dropdown: 0, 1, 2, 3 or more

- 30 In a typical week, how many hours do you work in all of your paid nursing positions? Fill-in: (accept numeric values only with error if <0 or > than 99)
- 31 In a week, how many hours do you volunteer your services as a nurse? Enter a value of zero if appropriate. If you only volunteer a few times per year, add up the total hours in a year and divide by 52 to get a weekly amount. Round to the nearest whole number. Fill-in: (accept numeric values only with error if > than 2000)
- 32 Including both your paid employment (if any) and your volunteer time (if any), how many hours of direct patient care do you provide in a typical week? Fill-in: (accept numeric values only with error if >than 99)
- Each of the next questions is about your primary place of employment, or volunteer nursing area if you are not employed. Your primary position is the one where you spend the most time each month as a nurse, regardless of whether you provide direct patient care or not.**
- 33 Please report the geographic location where you spend the majority of your time working or volunteering as a nurse: (This is your primary practice location.) Dropdown:  
Dropdown: City or County  
Dropdown: State  
Fill-in: Zip code
- 34 How long have you worked in your current nursing position? Dropdown  
Less than 6 months  
6 months to 1 year  
1 to 2 years  
2 to 5 years  
5 to 10 years  
More than 10 years
- 35 Please identify the title that most closely corresponds to your primary employment position: (Choose only one.) Dropdown  
Traveling nurse  
Staff nurse  
Manager  
Administrator / Executive  
Consultant  
Researcher  
Educator  
Clinical Nurse Specialist  
Certified Nurse Midwife  
Certified RN Anesthetist  
Nurse Practitioner  
Other: Fill-in
- 36 Please identify the type of setting that most closely corresponds to your primary employment position: (Choose only one.) Dropdown  
Hospital in-patient unit  
Hospital out-patient unit  
Hospital - other  
Nursing Home / Extended Care (nursing home, rehab, assisted living)  
Home care agency  
Hospice  
Physician's Office  
Public health agency  
Federally-funded health clinic  
Ambulatory care (medical practice, urgent care, HMO, surgical center, dental practice, etc.)  
Mental health / substance abuse agency

- 37 Please identify the specialty area that most closely corresponds to your area of practice in your primary employment position:  
(Choose only one.)
- Occupational health site
  - School health service (including college level)
  - Academic education program
  - Insurance / Case management company
  - Policy, Planning or Regulatory agency
  - Military base or facility
  - Corrections facility
  - Other
- 38 Select the response that best describes the total hours that you work in direct patient care in a typical work week at your primary place of employment.
- Dropdown
  - Acute care / critical care
  - Adult health
  - Anesthesia
  - Community health
  - Public health
  - Family health
  - Geriatrics / gerontology
  - Maternal-Child health / women's health
  - Nurse midwifery
  - Med / Surg
  - Occupational health
  - Oncology
  - Palliative care
  - Pediatrics
  - Neonatal care
  - Mental health / substance abuse
  - Rehabilitation
  - Student health
  - Trauma
  - Dialysis
  - Informatics
  - Quality improvement
  - Case management
  - Policy / regulation
  - Other
- 39 Overall how satisfied are you with your current primary care position?
- Dropdown
  - 32 or more
  - Less than 32 hours
  - Very Satisfied
  - Somewhat Satisfied
  - Somewhat dissatisfied
  - Very Dissatisfied
- 40 Within the past year, have you received or provided emergency preparedness training in any of the following areas?  
(Mark all that apply.)
- Dropdown
  - None
  - Chemical accident or attack
  - Nuclear/radiological accident or attack
  - Infectious disease epidemics
  - Biological accident or attack

- 41 Indicate which of these actions you plan to take in the next 5 years: (Chose only one.)
- Natural disaster
  - Other public health emergencies
  - Dropdown
  - Increase the number of hours I work or volunteer as a nurse
  - Reduce the number of hours I work or volunteer as a nurse
  - Maintain the same number of hours I currently work or volunteer as a nurse
  - Stop practicing as a nurse entirely, but not retire
  - Retire

**NOT EMPLOYED IN NURSING:** Please answer the following questions if you are currently not employed in a nursing position

- 42 Do you plan on seeking employment in a nursing position? Dropdown: Yes or No
- 43 Are you looking for a Full-time or Part-time position in nursing? Dropdown
- Full-time
  - Part-time
  - Not applicable
- 44 If yes, when will you be seeking employment in nursing? Dropdown:
- Within 6 months
  - 1 to 2 years
  - 2 to 5 years
  - 5 to 10 years
  - More than 10 years