

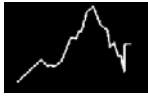
Department of Health Professions

<http://www.dhp.virginia.gov/>

**A Comparison of the
Virginia Licensed Nursing Workforce Survey
& the
National Sample Survey of Registered Nurses**

November 2010

**Virginia Department of Health Professions
Healthcare Workforce Data Center
Perimeter Center
9960 Mayland Dr, Suite 300
Richmond, Virginia 23233
804-367-2115, 8-4-527-4434 (fax)
E-mail: HWDC@dhp.virginia.gov**



Comparing National & Virginia RN Survey Results 2008

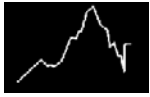
The US Bureau of Health Professions (USBHP) recently published its findings from the 2008 National Sample Survey of Registered Nurses (NSSRN). The NSSRN uses a different survey methodology than the Virginia Healthcare Workforce Data Center's Virginia Licensed Nursing Workforce Survey (VLNWS). Key differences in methodology appear in the following chart:

	NSSRN	VLNWS
Timeframe	July 2008 to March 2009	2007-2008 renewal period (includes early bird & grace periods)
Population	All licensed RNs (including those in compact states)	RNs renewing Virginia licenses online (does not include those practicing in Virginia from compact states)
Sample Selection Method	Stratified random	Convenience sample
Data Collection Method	Mailed surveys, electronic surveys, follow-up phone calls	Online surveys
Missing Data	Inferred using statistical methods	Ignored

The USBHP uses strict scientific methods to implement and analyze the NSSRN and aggressive follow-up to ensure a high response rate from the sample. The HWDC uses a pragmatic and cost-conscious methodology. The VLNWS captures data on an extremely large proportion of the licensed nursing population—its main advantage. Of an estimated national population of 3,063,162 registered nurses, 33,549 completed NSSRN surveys—approximately 1.1 percent. By contrast, over 61 percent of Virginia's licensed registered nurses completed surveys.¹ The VLNWS should capture an even higher proportion of licensed nurses in future iterations and eliminate some of the self-selection bias evident in the 2007-2008 survey. *However, differences between the results of the NSSRN and the VLNWS may be caused by different methodologies as much as—or more so—than differences in geography.* Nevertheless, a comparison between the results of the two surveys may provide some useful insights into the Virginia nursing workforce and how it compares to the national workforce. It may also provide insights into the efficacy of the VLNWS.

It is important to note that during the survey periods, the United States' economic fortunes swung drastically from exuberance into severe recession. While the recession officially began in December of 2007, for many Americans the magnitude of the crisis was revealed by the collapse of Lehman Brothers and the ensuing stock market crash in September/October 2008—

¹ Includes all 2007-2008 renewal period renewals and 2007-2008 new licenses issued.



especially as the economy became a prominent issue during the 2008 presidential campaign. A significant proportion of the VLNWS surveys were completed prior to the official start of the recession and even more were completed prior to the stock market crash in late 2008. By contrast, the NSSRN surveys were all completed during the recession, with a significant proportion of them being completed following the 2008 market crash. The recession may have influenced workforce participation rates, job satisfaction, retirement plans or responses to other survey elements.

Education

Both the NSSRN and the VLNWS examined the level of initial education and the highest level of educational attainment of registered nurses. Nationally, the proportion of nurses attaining diplomas through mostly hospital-based training programs has been on the decline while the proportion of nurses attaining associates, bachelors and higher degrees in nursing has been on the rise. The VLNWS revealed a significantly *lower* proportion of registered nurses attaining associates degrees—both initially and afterwards-- compared to NSSRN (See Figures 1 & 2). This result is likely explained by the fact that the VLNWS' population included only *renewing* nurses. A significant proportion of the 11,545 nurses who attained their initial RN licensure in the 2007-2008 biennium were likely relying on associate degrees. Over half of Virginia's RN program graduates attained associates degrees.

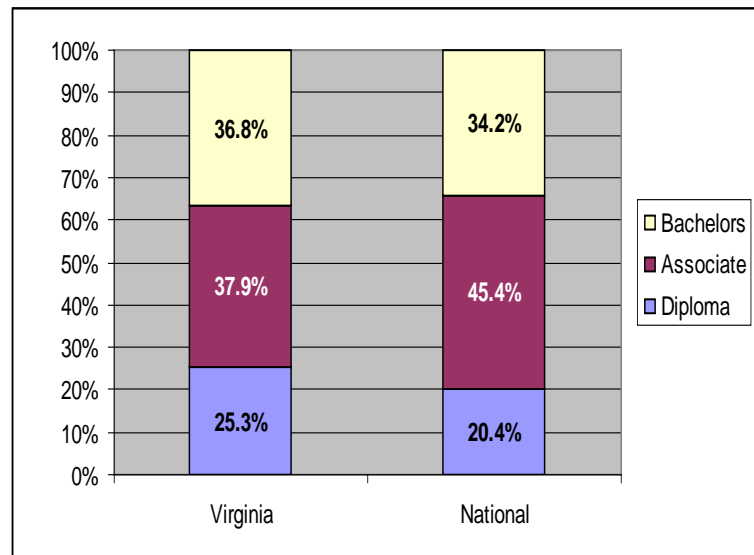


Figure 1: Initial Nursing Education. These figures are likely skewed by the fact that Virginia's survey did not include those applying for their initial license as RNs.

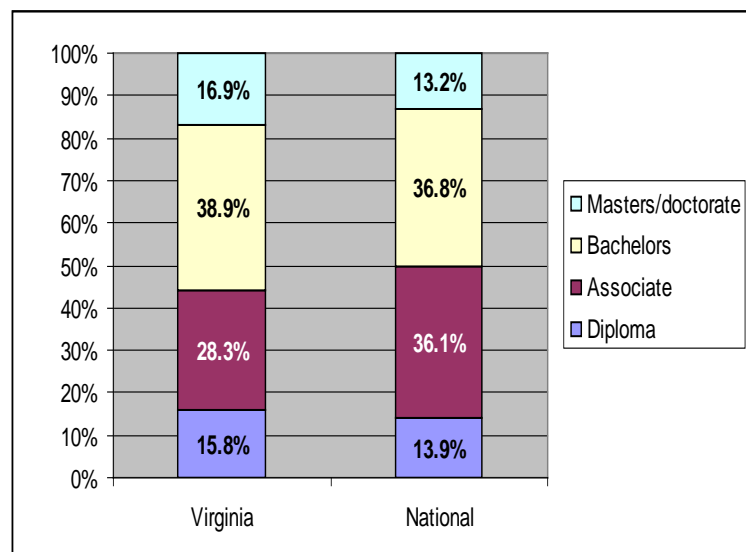
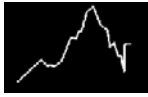


Figure 2: Highest level of educational attainment. These figures are likely skewed by the fact that Virginia's survey did not include those applying for their initial license as RNs.



Once receiving their licenses, many registered nurses pursue higher levels of education in nursing or nursing related fields. The results of the VLNWS suggest higher levels of educational attainment by initial degree type in Virginia; however, these results are also likely affected by the missing new licensees from the VLNWS survey data. New licensees will obviously still have their initial education as their highest level of educational attainment. Additionally, the NSSRN included only nursing or nursing-related education among its published results while the VLNWS included all education. See figure 3.

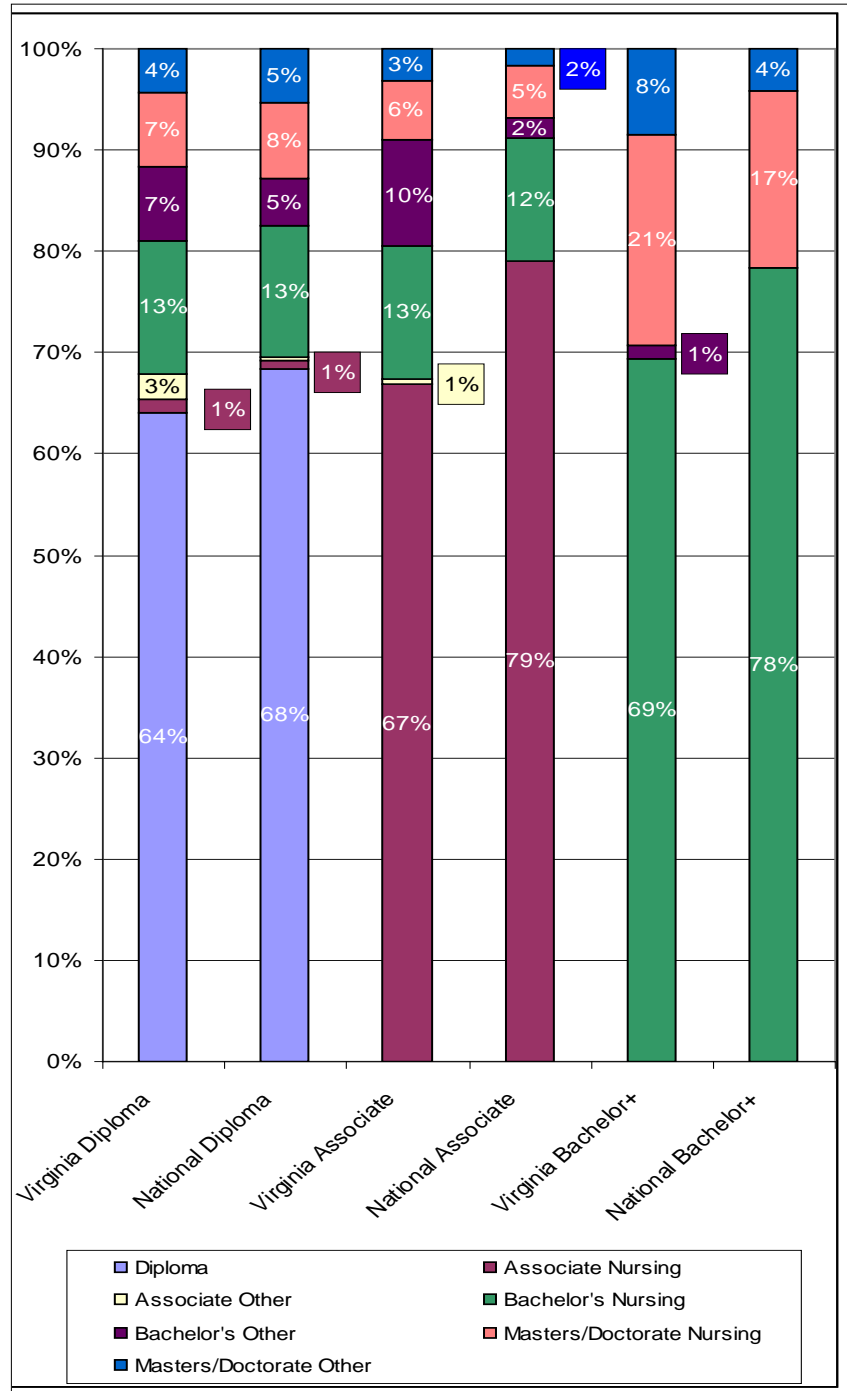
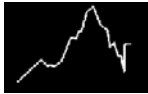


Figure 3: Highest level of educational attainment by initial education. The horizontal axis lists initial licensure. These figures are likely skewed by the fact that Virginia's survey did not include those applying for their initial license as RNs.



Age Distribution of Registered Nurses

The USBHP reported age results for the entire US and by region. Figure 4 shows these results for all registered nurses and for those employed in nursing. Figure 4 also shows the age distribution of respondents to the VLNWS for all registered nurses and for those employed in nursing. The VLNWS results are reported using age categories that *end* in fives or tens. Normally, age categories *begin* in fives or tens to account for age “0” and to allow easy reference to persons in their “20s”, “30s” etc. In Figure 4, the age categories for the VLNWS appear in parentheses. While the age categories do not match up, they still allow for some insight.

Surprisingly, the VLNWS results suggest a relatively high number of Virginia’s RNs are age 30 or younger. This is an encouraging result. Since the VLNWS does not include new licensees, this number should be relatively low. The proportion of Virginia’s nurses “peaks” in the 46-50 age category. Nationally, and particularly in the Middle Atlantic States, the proportion peaks in the 50-54 age category. Recalculating using congruent age categories may mitigate this difference. Finally, a relatively small proportion of Virginia’s licensed nurses are over age 65—however a large proportion of those maintaining their licenses remain employed in nursing. Overall, Virginia’s nurses trend slightly younger than those in the Middle Atlantic, and if new licensees were included Virginia’s nursing population would likely trend even younger.

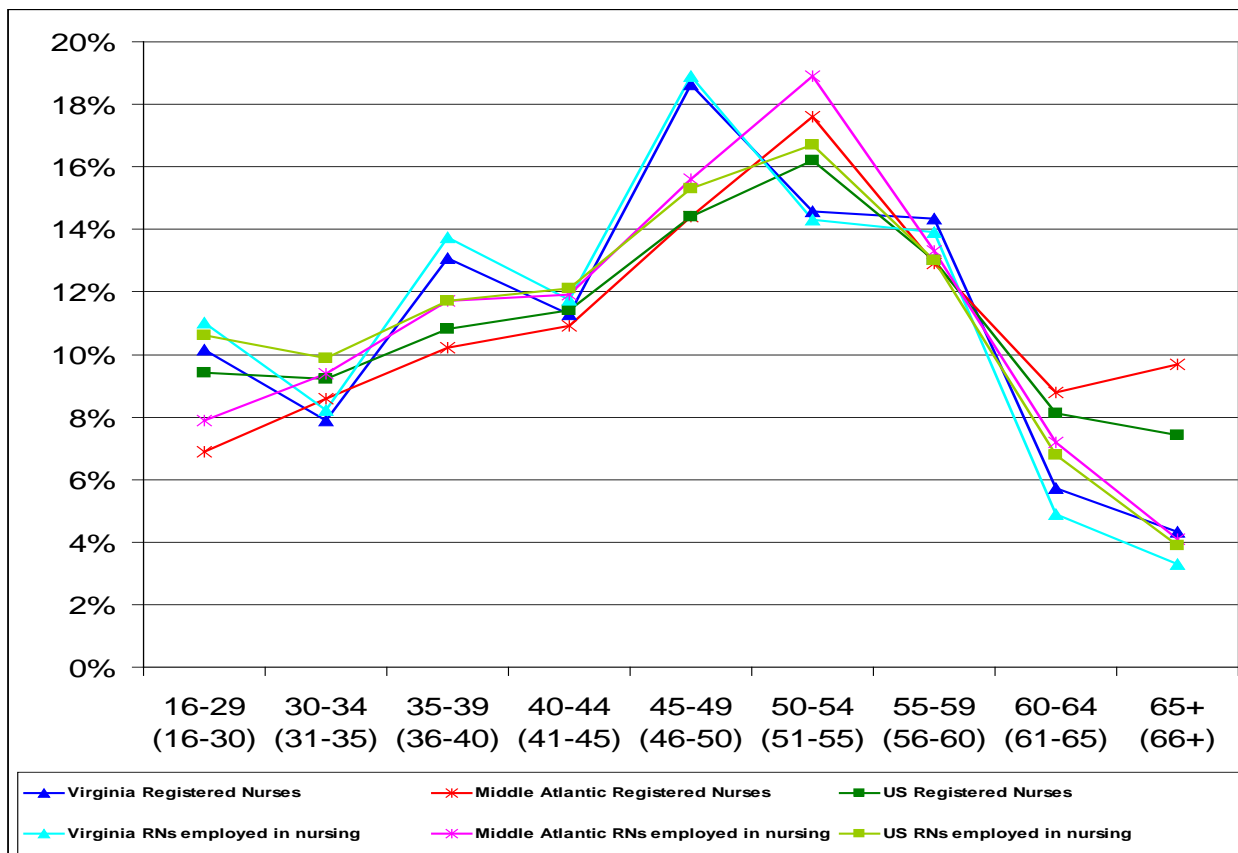
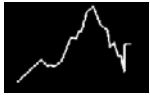


Figure 4: Age Distribution of Virginia’s Nurses. The VLNWS and the NSSRN used different age categories. The VLNWS categories appear in parentheses.



Employment Status

The VLNWS and the NSSRN suggest similar nursing workforce participation rates (see Figure 5). The VLNWS results have a slightly higher non-participation rate. Non-participation includes those nurses who are retired, employed outside of nursing or who are unemployed. Renewing nurses may be more likely to be retired or employed outside of nursing, while new licensees may be less likely to be employed. This may mitigate the impact of either factor.

The VLNWS suggests that the nurses who participate in Virginia's nursing workforce are more likely to be employed full-time. This may be due to the relative youth of Virginia's nursing workforce, as older nurses tend to work fewer hours. The fact that new licensees are not included may also play a role. Additionally, the recession may have played a role in NSSRN employment status results. In general, employers cut back hours and are less willing to take on new full-time employees during a recession. At the same time, they are more willing to hire part-time or temporary workers. Which of these or other factors explain the difference is unknown but the differing survey methodologies and timeframes likely explain much of the difference.

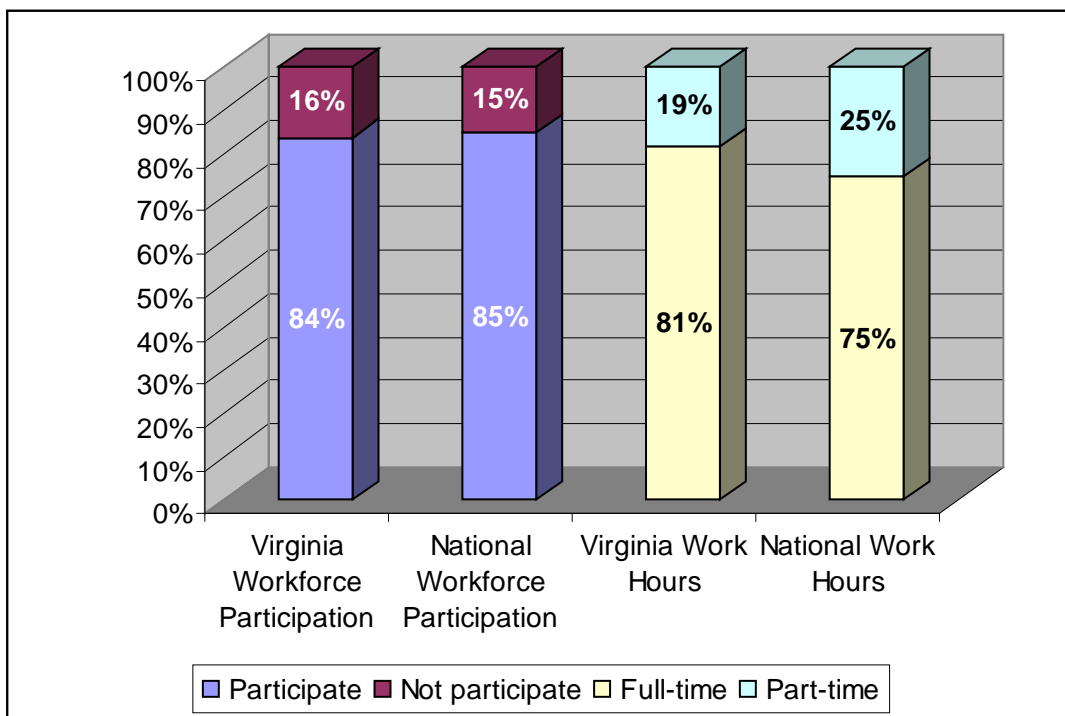
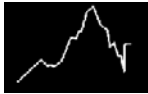


Figure 5: Nursing Workforce Participation



Employment Setting

The NSSRN and VLNWS results exhibit wide variation in reported employment settings among registered nurses. Part of the reason for this disparity is the different definitions used to describe work settings. For instance, the NSSRN defines nurses employed in nursing homes and skilled nursing facilities based within hospitals as working in hospitals. Nurses responding to the VLNWS may have self-reported similar employment settings as “long-term care”—referred to in Figure 6 as “Nursing home/extended care”. Additionally, the VLNWS included categories such as military facility or mental health that do not match NSSRN categories. Nurses indicating employment in these settings were lumped together in the “other” category for Virginia in Figure 6. Nurses working in similar settings nationally may have chosen a variety of categories in the NSSRN survey. These incongruent categories likely explain much of the difference in reported employment settings.

An important disparity is not explained by differences in category definitions. A very small proportion of Virginia’s registered nurses report employment in academic education compared to national figures. This is especially troubling since the VLNWS did not include nurses seeking initial licensure—nurses who presumably would not have the experience to work as nursing faculty. This is a discouraging result for a state facing a growing nursing shortage.

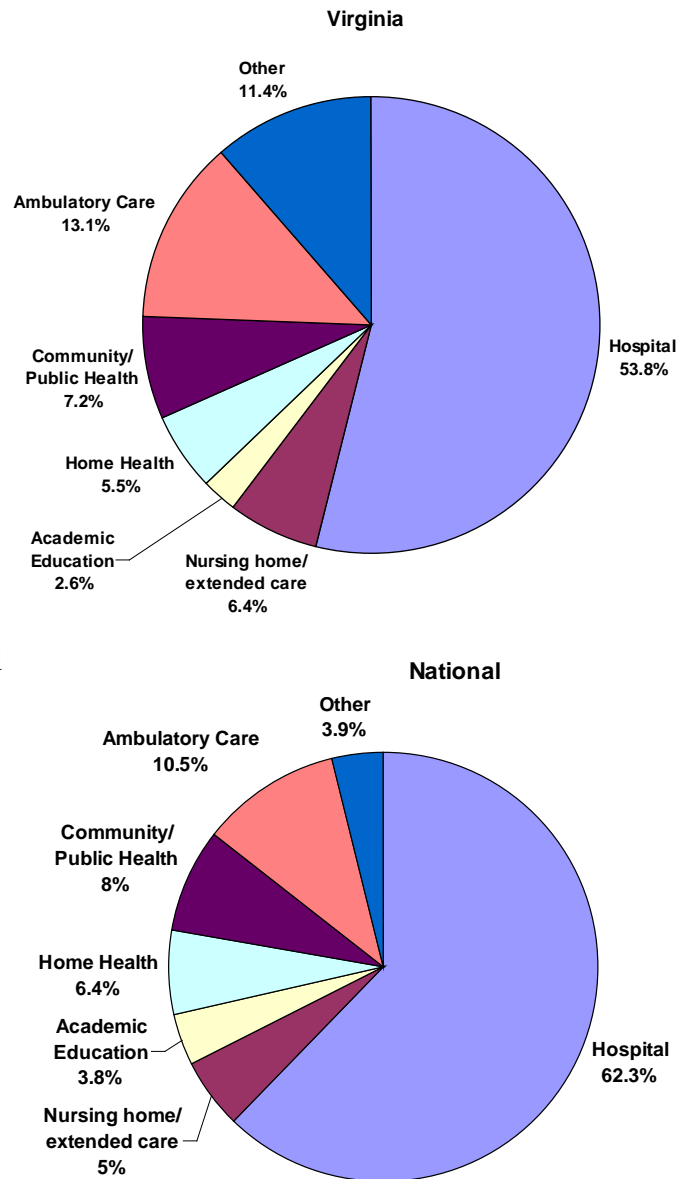
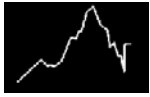


Figure 6: Employment Settings. The VLNWS and the NSSRN used different definitions for each setting categories, explaining much of the difference between the results.



Job Satisfaction

Virginia’s nurses appear to be happy in their jobs. Although there is some difference in categories and in terminology, a full 54.1 percent of respondents to the VSNWS placed themselves in the highest category for job satisfaction compared to 29.3 percent of respondents to the NSSRN. Terminology may account for some of this difference—nurses are more likely to describe themselves as “very satisfied” than “extremely satisfied”. Additionally, voluntary respondents to a nurse licensure survey are more likely to be satisfied with their profession in general. Nevertheless this is a large difference which is also matched by a smaller number of dissatisfied nurses.

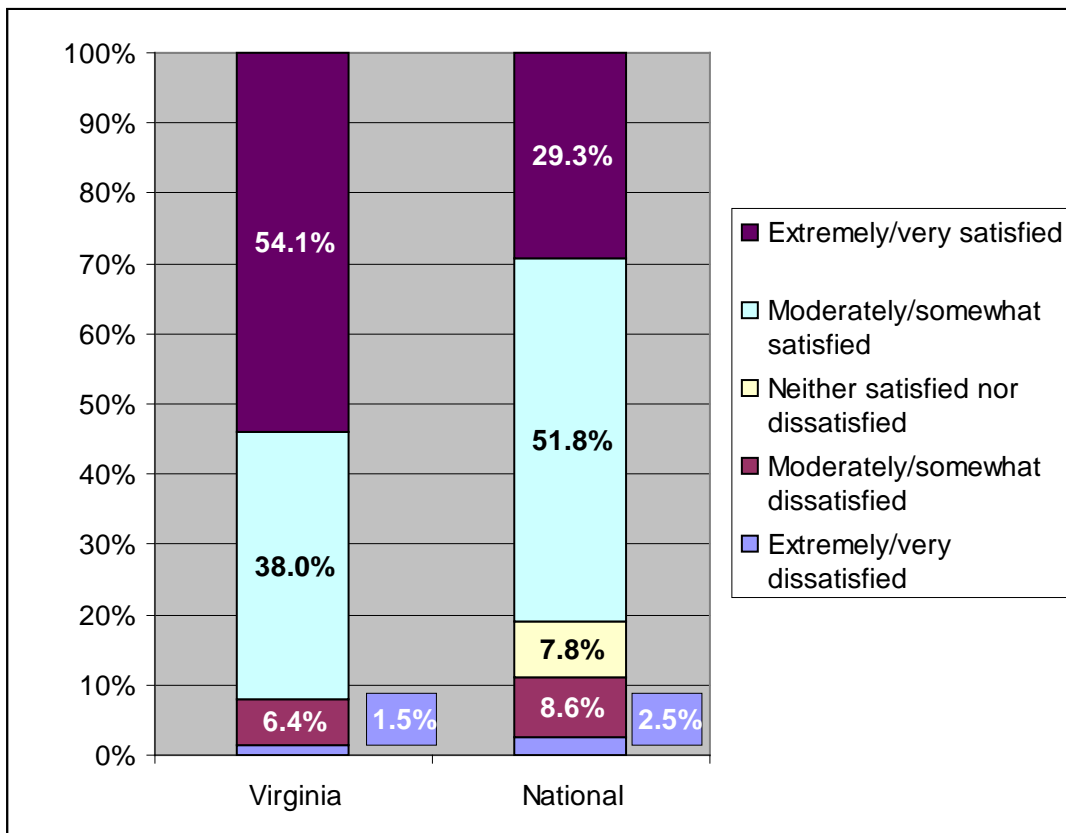
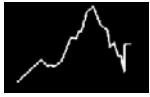


Figure 7: Job Satisfaction. Over half of Virginia’s nurses are very satisfied with their current job. Very few are dissatisfied.



Demographics

A smaller proportion of respondents to the VLNWS survey were male compared to the NSSRN (see Table 1). Part of the 1.2 percent difference may be explained the lack of initial licensees in VLNWS data. National data indicate that males make up a growing proportion of new licensees.

	VLNWS	NSSRN
Male	5.8 %	7.0 %
Female	94.2 %	93.0 %

Table 1: Gender

	VLNWS	NSSRN
White	84.9%	85.5%
Black/African American	8.3%	5.1%
Asian/Pacific Islander	4.3%	4.6%
American Indian/Alaskan Native	0.2%	0.4%
Hispanic/Latino	1.1%	2.7%
Two or more races	1.2%	1.7%

Table 2: Nursing Demographics

Overall, the VLNWS suggest that Virginia has a slightly higher minority participation in its nursing workforce than nationally (see Table 2). This is largely driven by an increased participation by African-Americans. The VLNWS results suggest that a smaller proportion of Virginia's nursing workforce is Hispanic compared to the national nursing workforce.

Virginia's population demographics explain much of this difference. A larger proportion of Virginia's population is African American compared to national figures, and a smaller proportion is Hispanic (see Figure 8).

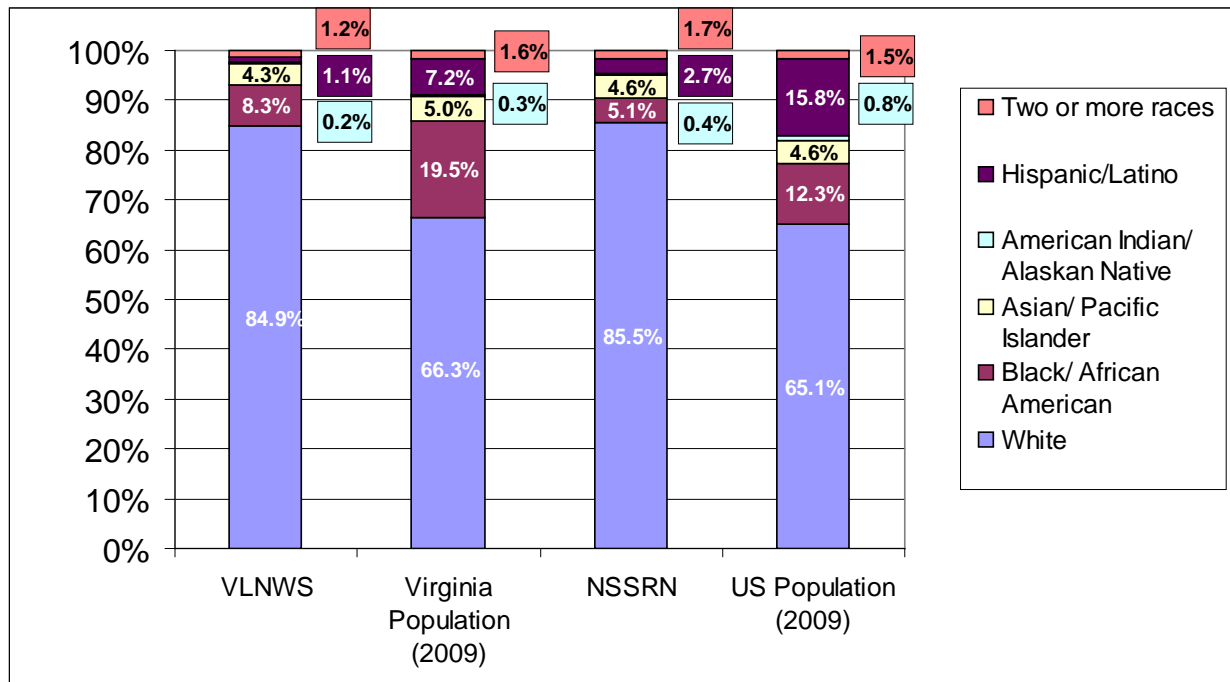
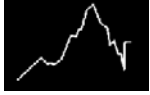


Figure 8: Nursing licensee demographics compared to population demographics



Despite maintaining a slightly higher minority participation rate compared to national figures, the VLNWS results indicate that Virginia still has a long way to go before achieving a nursing population that matches its total population. Research suggests that diversity in the health workforce supports parity in health outcomes. It also likely supports parity in economic outcomes and opportunities. The health sector is an important sector of our economy and pays relatively high wages overall, providing an excellent opportunity for economic mobility.

Conclusions

The US Bureau of Health Professions has conducted NSSRN since 1977. It sends out new surveys to a small, scientifically selected sample of nurses every four years. The VLNWS is currently collecting data for its second iteration. The data reported here is from the first iteration of the VLNWS. It reflects only a portion (albeit a large portion) of renewing nurses using the online renewal process. The VLNWS is an ongoing effort. Its current and future iterations will collect information on just about every licensed nurse Virginia on a continual basis.

This comparison of the two surveys demonstrates how differing methodologies can influence results. The VLNWS has improved its methodology for the current iteration of the survey—in particular by capturing new licensees and a larger portion of licensed nurses. Other methodological differences, such as the two-year timeframe and the online format, are intentional. For the second iteration of the VLNWS, we expect some of the differences in results to converge with the NSSRN. The VLNWS will provide a richer picture of Virginia's nursing workforce and complement the framework created by the NSSRN.

Like other states, however, Virginia's efforts to collect data are directed towards its own needs. This often makes comparisons among national surveys and surveys conducted by other states difficult. A recent initiative of the Institute of Medicine and the Robert Wood Johnson Foundation, *The Future of Nursing: Leading Change, Advancing Health*, noted that the lack of consistent and congruent data on the nursing workforce is a primary challenge to assessing the needs of the entire healthcare workforce—particularly in an environment of rapid change in the health system. Among its many recommendations, the initiative recommended the National Health Care Workforce Commission, newly created by the Affordable Care Act, develop a standardized minimum data set for use by all states. The Virginia Healthcare Workforce Data Center is embracing this effort and hopes to work closely with the NHCWC and the Virginia Board of Nursing to shape and implement this important and timely initiative.