VOLUME 7, ISSUE 1 · APRIL 2016 SUPPLEMENT

THE OFFICIAL JOURNAL OF THE NATIONAL COUNCIL OF STATE BOARDS OF NURSING

JOURNAL OF NURSING REGULATION

Advancing Nursing Excellence for Public Protection

The 2015 National Nursing Workforce Survey

Jill S. Budden, PhD; Patricia Moulton, PhD; Kimberly J. Harper, RN, MS; Mary Lou Brunell, MSN, RN; and Richard Smiley, MS

JOURNAL OF NURSING REGULATION

Volume 7, Issue 1 supplement • April 2016

Pages S1–S92

ELSEVIER

JOURNAL OF NURSING REGULATION

Official publication of the National Council of State Boards of Nursing

The *Journal of Nursing Regulation* is a quarterly, peer-reviewed professional journal published by Elsevier and supported by the National Council of State Boards of Nursing (NCSBN), a not-for-profit organization. NCSBN can be contacted at:

111 East Wacker Drive, Suite 2900
Chicago, IL 60601-4277
Telephone: 1-312-525-3600
Fax: 1-312-279-1032
https://www.ncsbn.org

Subscription, advertising, reprints
Go to www.journalofnursingregulation.com or jnr@ncsbn.org.

ISSN 2155-8256

The 2015 National Nursing Workforce Survey

Jill S. Budden, PhD
Research Associate, National Council of State Boards of Nursing

Patricia Moulton, PhD
Executive Director, North Dakota Center for Nursing
President, The National Forum of State Nursing Workforce Centers

Kimberly J. Harper, RN, MS
Chief Executive Officer, Indiana Center for Nursing

Mary Lou Brunell, MSN, RN
Executive Director, Florida Center for Nursing

Richard Smiley, MS
Statistician, National Council of State Boards of Nursing

CONTENTS

April 2016 • Volume 7 • Issue 1 Supplement

Advancing nursing excellence for public protection

Mission

The *Journal of Nursing Regulation* provides a worldwide forum for sharing research, evidence-based practice, and innovative strategies and solutions related to nursing regulation, with the ultimate goal of safeguarding the public. The journal maintains and promotes National Council of State Boards of Nursing's (NCSBN's) values of integrity, accountability, quality, vision, and collaboration in meeting readers' knowledge needs.

Manuscript Information

The *Journal of Nursing Regulation* accepts timely articles that may advance the science of nursing regulation, promote the mission and vision of NCSBN, and enhance communication and collaboration among nurse regulators, educators, practitioners, and the scientific community. Manuscripts must be original and must not have been nor will be submitted elsewhere for publication. See www.journalofnursingregulaton.com for author guidelines and manuscript submission information.

Letters to the Editor

Send to Maryann Alexander at malexander@ncsbn.org

The 2015 National Nursing Workforce Survey

Executive Summary

The National Council of State Boards of Nursing has partnered for the second time with The National Forum of State Nursing Workforce Centers to conduct the only national-level survey specifically focused on the U.S. nursing workforce. The National Nursing Workforce Survey, first conducted in 2013, generates information on the supply of nurses in the United States, information that is critical to planning for well-prepared and well-educated nurses in sufficient numbers to meet the health care needs of the nation, ensuring a safe, diverse, accessible, and effective health care system.

In addition to providing a portrait of the current state of the nursing workforce, the data from this study facilitate the following:

- Examination of national workforce trends. The current survey data can be compared with data from previous Nursing Workforce surveys, including the 2013 study mentioned above, and the Health Resources and Services Administration (HRSA) nursing surveys (conducted from 1990 to 2008). Also, trends can be ascertained by a look at this year's data only; for example, this year's data concerning age and year licensed provide an idea of how the workforce will change as nurses retire.
- State-level analysis. Each board of nursing and state nursing workforce center will be provided their state's data for further analyses that can help employers, educators, and others in developing policies and initiatives impacting the supply of nurses in their state.
- Further research. The national survey generates a broad data set from which important substudies or analyses can be conducted.

As of June 2015, the total number of active registered nurse (RN) licenses held was 4,378,273 and active licensed practical/vocational nurse (LPN/VN) licenses held was 1,030,080. These numbers include approximately 12% who hold multiple licenses; these individuals were removed prior to sampling. Over 260,000 individual RNs and LPN/VNs were randomly selected from the study sample to participate in the survey (140,154 RNs and 120,793 LPN/VNs). Nurses throughout the United States with active licenses were asked to report on their age, gender, race, education, employment, and other characteristics.

Participants received an announcement postcard in late June of 2015 and received their first survey in early July. Participants could submit their responses via mail or online until the survey closed on September 15th. In total, 78,739 nurses (46,476 RNs and 32,263 LPN/VNs) responded to the survey. A formal nonresponse analysis was conducted and weighting was used in the analysis process to adjust the distribution across states, age, and gender.

Selected Results From the Survey

Size of the Nurse Workforce

As of June 2015, an estimated 3,852,881 individuals held an active RN license (up from 3,530,174 in 2013) in the United States and its territories, representing an increase of 322,707 RN licensees from 2013; an estimated 906,471 individuals held an LPN/VN license in the United States and its territories. Respondents had been licensed for an average of 20.9 years (*M*, 19, *SD* 14.8); 81.1% of RNs and 77% of LPN/VNs were employed in nursing. Only 5.4% of RNs were initially licensed as an RN or LPN/VN outside of the United States (2.6% in the Philippines; 0.5% in Canada, and 2.0% in other countries). An examination of the type of license currently held by RNs revealed that 8.6% held an advanced practice registered nurse (APRN) license and, of those, 70.4% were licensed as a nurse practitioner.

Education of RNs and LPN/VNs

Evidence on the academic progression of RNs has been steadily accumulating over the past few years. When asked to indicate highest level of education, 65% of respondents in the current study indicated that they had obtained a baccalaureate or higher degree, up from 61% in 2013. The current study also found an increase in the percentage of respondents with a BSN as their initial nursing education. Specifically, in 2013, 36% indicated a BSN as their initial nursing education, while in 2015, 39.0% indicated this. Additionally, in the current study, almost 42% of RNs held either a BSN (39.0%) or graduate degree (3.0%) as their initial credential. Newly licensed RNs, those licensed from 2013 to 2015, were more likely to have obtained a BSN as their initial education (48.6%) versus RNs licensed prior to 2000 (34.8%).

More than two-thirds of LPN/VNs indicated their highest level of education was a vocational/practical certificate in nursing; about 6% have gone on to obtain further education beyond this certificate. The vast majority (95.1%) were educated in the United States. The 4.9% of LPN/VNs who were educated outside the United States tended to have achieved a higher level of education—17.6% of foreign-educated LPN/VNs held BSN degrees, compared to 0.3% for U.S.-educated LPN/VNs.

Employment Status

The study revealed 81.1% of RN licensees were actively employed in nursing and of those, 62.9% worked full time. In 2013, 85% of RNs were actively employed, with 60% employed full time. The current study shows that the percentage of those younger than age 30 who are working in nursing is consistent with 2013 data. However, in the 50-and-older age cohort, the current study shows a drop-off in percentage employed in nursing when compared to 2013 data. For instance, in 2013, 47% of those age 65 and older were employed in nursing; in 2015, 40.1% were employed in nursing.

Hospitals remain the most common employment setting for RNs, at 54% (down from 56% in 2013 and down from HRSA's 62% in 2008). Therefore, although numbers of RNs are increasing, fewer are working in hospitals.

Overall, 77% of LPN/VNs were employed in nursing. However, data indicate that LPN/VNs older than age 60 were less likely to be employed in nursing, as compared to the younger-than-30 age cohort. The most common primary care setting of LPN/VN respondents was nursing home/extended care (30%), followed by home health (15%) and hospitals (approximately 11%).

The "work setting" for both RNs and LPN/VNs is changing, as patient care is no longer confined within the walls of the health care facility owing in part to the growing use and acceptance of technology (American Well, 2015; HIMSS Analytics, 2015). The current survey found that nearly half of RNs and LPN/VNs have provided nurse services using telehealth technologies. Of those, 39.4% of RNs provided these services across a state border and 7.7% across a national border; 17% of LPN/VNs did so across a state border, and 4% engaged in telehealth across a national border.

Demographics

Promoting diversity, including gender, race, and ethnic diversity, in the profession to better represent the patient population it serves has been a specific recommendation to the nursing profession for many years (IOM, 2010).

The current study indicates that male RNs (8.0%) were better represented in the nursing workforce compared to 2013 results (7%). While this percentage is lower than the 9.2% reported by HRSA (2015), our data indicate a substantially higher proportion of male nurses in the more recently licensed cohorts (12.7%) as opposed to those licensed prior to 2000 (4.7%). A substantially larger proportion of foreign-educated LPN/VNs were male (22.7%) compared to U.S.-educated LPN/VNs (6.7%).

The aging of the RN workforce has slowed. The average age of the RN respondents was 48.8 (down from age 50 in 2013); 50% of respondents were age 50 or older and 12.4% were age 65 or older. The average age of LPN/VNs was 47.8.

The current study did not indicate an impending shortage of RNs as a result of large numbers of older nurses retiring. In fact, there was not a disproportionate number of older RNs; further, RNs in the older age cohorts were less likely to be employed in nursing full time. However, among APRNs, an increasing age was detected with certified nurse midwives and clinical nurse specialists, more so than with nurse practitioners and certified registered nurses anesthetists. However, data do suggest an aging nurse faculty. Approximately 50% of full-time faculty were age 50 and older.

In terms of racial and ethnic diversity, minority groups accounted for approximately 19.5% of the RN respondents in both the 2015 and 2013 surveys and for 32% of LPN/VN respondents. HRSA's brief on gender and racial/ethnic diversity of U.S. health occupations for 2010–2012 found a rate of ethnic minorities of 21.4% (HRSA, 2015). These estimates are below the almost 40% of ethnic minorities in the U.S. population (U.S. Census Bureau, 2015). When compared with White/Caucasian nurses, the current study's data indicate ethnic minorities are better represented in younger age-groups and in more recently licensed RNs than in older RNs and RNs licensed prior to 2000. Newly licensed LPN/VNs were more likely to have a more diverse racial/ethnic composition; specifically, of LPN/VNs licensed prior to 2000, 78.8% were White/Caucasian versus 55.6% of LPN/VNs licensed from 2013 to 2015, a fact suggesting that as older RNs retire, the RN workforce may become more racially/ethnically diverse.

The median salary for female RNs was $64,000, while the median salary for male RNs was $72,000. The current study found that salary does increase with higher levels of education. The median earnings for male LPN/VNs was $43,200, while the median earnings for female LPN/VNs was $38,000.

Conclusion

This National Nursing Workforce Survey represents just one point in time. Ongoing monitoring and evaluation will be very important as the nursing workforce continues to evolve. Overall, the nursing workforce is expected to change as older nurses retire and new nurses step in to fill their shoes; however, the data do not suggest an impending shortage of RNs or LPN/VNs due to large

numbers of older nurses retiring. The nursing workforce today is younger, has a higher initial nursing education, and is more diverse, demonstrated by changes in the ratios of racial/ethnic minorities and the ratio of men to women—a trend that is likely to continue.

Data gleaned from the current survey suggest that advances in technology will contribute to higher percentages of nurses providing services across state borders using telehealth.

Changes in the health care environment are especially relevant for LPN/VNs, as the demand may be changing as the health care environment calls for higher levels of nursing education.

Without question, a new generation of nurses will play a large role in transforming how, where, and why nurses learn and practice. The nursing workforce will certainly undergo significant changes over the next 5 years due in no small part to the fact that the millennial generation (those born between 1980 and 1999) is the largest generation ever—numbering more than 90 million. If millennials enter the nursing profession at the same numbers as the current nursing population, they will likely replace the nurses retiring, resolving any shortage issues. With millennials being the most-educated group, our entry-to-practice debates may also be resolved by this generation.

Introduction

Having an adequate supply of registered nurses (RNs) and licensed practical/vocational nurses (LPN/VNs) in the U.S. workforce is critical to ensuring a safe and effective health care system. Data on the supply of the nursing workforce can be used to predict possible shortages and assist in the allocation of resources, program development, and recruitment efforts in both the health care system and education sectors. A recent report on the future of nursing noted that the nursing workforce is constantly evolving, and supply and demand of RNs will be affected by many uncertain factors, including population growth, aging of the population, economic conditions, and changes in the health care environment (Health Resources and Services Administration [HRSA], 2014). This national survey of RNs and LPN/VNs represents one point in time and needs ongoing monitoring and evaluation.

For 3 decades, the HRSA reported on the supply of RNs through the *National Sample Survey of Registered Nurses* (NSSRN). The final NSSRN was completed in 2008 (HRSA, 2010). In 2013, the National Council of State Boards of Nursing (NCSBN) and the National Forum of State Nursing Workforce Centers, through a collaborative effort, stepped in to fill the void of national RN workforce supply data (Budden, Zhong, Moulton, & Cimiotti, 2013). This study is an ongoing joint venture to collect current nursing workforce supply data. In addition to collecting RN workforce data, the current study collected data on the LPN/VN workforce for the first time. To help illustrate trends in workforce supply data, in some instances the current study's 2015 data were compared to 2013 data (Budden et al., 2013), 2008 data (HRSA, 2010), and 2008–2010 American Community Survey data (HRSA, 2013).

Method

Sample

All RNs and LPN/VNs in the United States and its territories were eligible candidates for survey participation. A portion of the sample was drawn from Nursys®, NCSBN's licensure database. This database contains basic demographic and licensure information for RN and LPN/VN licensees, with the exception of Alabama, Hawaii, Louisiana (PN), and Oklahoma because, at the time of the study, these states did not participate in Nursys. Additionally, Kansas, Massachusetts, and Washington restricted addresses in Nursys, and Pennsylvania did not include addresses. These states were contacted to obtain licensee lists and addresses directly. Boards of nursing (BONs) that participate in Nursys were contacted and asked permission to use their licensee list in Nursys for this study. Medical Marketing Service list was used to obtain the sample for New York.

As of June 2015, the total number of active RN licenses held was 4,378,273 and active LPN/VN licenses held was 1,030,080. These numbers include an estimated 12% of individuals with multiple licenses. Individuals with multiple licenses were removed prior to sampling. Sampling was stratified random sampling and stratified by state. The sample included approximately 140,000 RNs and 121,000 LPN/VNs (see Tables 1 and 2).

Tables 1 and Table 2 present the sampling by jurisdiction/state. Each jurisdiction is listed with the actual number of active licenses at the time of sampling. The number of surveys needed to be received from each jurisdiction in order to receive 95% confidence and 3% error is presented. Regardless of jurisdiction size, this calculated out to be approximately 1,000/jurisdiction. To calculate the number of surveys needed to be mailed out to reach the target survey response, response rates via online and paper from the previous 2013 survey administration were used as estimates. For example, for Alaska, in 2013, there was a 36% response rate. Given the estimated 36% response rate in Alaska, 2,753 participants were selected to be sent a survey in order to receive the target of 991 surveys. Actual response from Alaska RNs to the current survey (i.e., the number received) was 971, very close to the target of 991 surveys (see Table 1).

Materials

Data were collected between July and September 2015. The study instrument was a two-page (front and back) Scantron fillable document with 31 questions (see Appendix D). Questions for the 2015 survey repeated most of the questions from the 2013 NCSBN survey, which was based on The National Forum of State Nursing Workforce Center's minimum dataset (MDS) for the nursing workforce. Additional questions were added to the 2015 survey on the topics of salary, specialty settings, and telehealth. In general, the following items were added: specialty setting, salary, and telehealth. Additionally, some MDS questions were modified; for instance, additional specialties and position titles were added. No pretesting was done with these modifications. Items were added because, for example, workforce data were lacking in a specific specialty or specialty setting area. The salary item was worded in a manner similar to HRSA (2010), and the telehealth items were added in an effort to collect much needed data in this growing area of nursing practice.

The nursing MDS instrument was created through a process of consensus-building. The National Forum's workgroups (participating states included Alabama, Colorado, Florida, Hawaii, Illinois, Indiana, Iowa, Massachusetts, New Jersey, North Dakota, Oklahoma, Tennessee, Vermont, and West Virginia) drafted the dataset. Following a public comment period, which allowed input

from national organizations, The National Forum voted and approved the datasets in September 2009. NCSBN and The National Forum currently use the MDS questionnaire to collect data on the nursing workforce at the state level and believe that the dataset enhances the ability to plan for the future. More information about the development and current status can be found in Moulton et al. (2013) and Nooney et al. (2010).

Procedure

Institutional review board approval was obtained by Western Institutional Review Board (WIRB). A unique identification number was generated and assigned to each sampled participant. The identification was only to be used to record that the survey had been returned. This helped prevent unnecessary and expensive duplicate mailings to those selected to participate in the study. Also, a unique access code identified was used for the online survey option.

Electronic versions of the data will be kept on department-secured servers. NCSBN's research department, three key members of The National Forum of State Nursing Workforce Centers, and key personnel at Scantron had initial access to the identifiable data. Scantron no longer has access to the identifiable data. A de-identified data file was created for use with additional analyses and for distribution to state BONs and state nursing workforce centers.

The Dillman approach was used to plan and distribute the materials and includes a series of steps where the potential participant is repeatedly contacted in an effort to get a survey response (Dillman, Smyth, & Christian, 2009). Dillman specified a specific set of procedures, including creating a booklet survey with a precise schedule of contacts. For example, in the first week, a survey is sent. In the second week, a thank you or reminder postcard is sent. In the fourth week, a replacement/duplicate survey is sent to nonresponders, and in the seventh week, a replacement/duplicate survey is sent to nonrespondents by first-class mail.

Postcards, letters, paper surveys, and Web surveys were designed, and a participant sampling file was compiled according to the sampling protocol. Once materials were developed and the sampling file was complete, surveys were distributed over a 14-week period that included the following steps:

1. Week 1: An announcement postcard was sent to all nurses selected to participate.
2. Week 2: A letter inviting nurses to complete the survey was mailed. The hardcopy survey was included, along with an online option. Instructions were to return the survey within 1 week of receipt. Two versions were mailed in the same week, one sent first class and the second sent using a nonprofit rate.
3. Week 8: For nurses who had not responded, a letter inviting nurses to complete the survey was mailed. The hardcopy survey was included, along with an online option. Instructions were to return the survey within 1 week of receipt. Again, two versions were mailed in the same week, one sent first class and the second sent using a nonprofit rate.
4. Week 14: Deadline for receipt of surveys for data analysis was set internally, along with the closure of the online option.

Once the survey was closed, the final datafile was compiled separately for RNs and LPN/VNs. A nonresponse bias analysis for both the RN and LPN/VN datasets was performed and a variable weighting procedure was used for study analyses to correct for response bias.

Analysis

At the close of the survey, 46,476 of the 140,154 RNs had responded, after removing 4,448 undeliverables the response rate was 34.2%; 32,263 of the 120,793 LPN/VNs had responded, after removing the 5,493 undeliverables for a response rate of 28.0%. A formal nonresponse bias analysis was conducted immediately following the close of the survey. An analysis of basic demographic data (i.e., gender, age, race/ethnicity, number of years since graduation and first licensed) for all RN licensees sampled from the Nursys database was used to compare the survey respondents and nonrespondents, to determine the representation of the survey participants. Results revealed that the following groups of nurses may have been slightly overrepresented: White/Caucasian, female, age 60 or older. Because of missing or incomplete data on race/ethnicity, only gender and age were used to make nonresponse weighting adjustments. Additionally, since the sampling was stratified by state, to prevent smaller states from being overrepresented in the overall analysis, a weighting variable was constructed to adjust for differing nursing population sizes across states.

Descriptive statistics, including means, frequencies, and cross-tabulations were used to analyze survey data. Unavoidably, missing data in certain variables caused inconsistent statistics in certain categories. To help the readers get an accurate and comprehensive view of the statistics drawn from the sample, the number of actual valid answers to each question is reported in every table. Missing data were not imputed; hence, the presented statistics represent the actual responses from participants who responded to each respective survey item. If a participant did not respond to a certain item, they were not part of the analysis for that item.

Additionally, some tables display data for all responding nurse licensees while other tables display data for employed nurses. If a table is specific to nurses employed in nursing, it will be explicitly stated. For example, "Initial Nursing Education of RNs Employed in Nursing, by Gender" displays data from only respondents employed in nursing. However, if the table was titled, "Initial Nursing Education of RNs, by Gender," this table would present data from all respondents, regardless of their employment

status. Conversely, employment status may be implicit, given the data in a table; for instance, a table displaying the percentage of nurses with a specific job title implies that the data being presented is specific to nurses employed in nursing.

Finally, when analyzing table data, know that some tables are organized horizontally while others are organized vertically. The "n's" in the table help guide the reader in the direction to read the data. For example, for tables analyzed by age, data is read horizontally. The large number of age categories serves as a means to provide an age distribution for each variable in the table (e.g., the age distribution of men followed by the age distribution of women or the age distribution of Asian in comparison to the age distribution of White/Caucasian). In general, reading tables row by row, or column by column is suggested over attempting to consume all of the statistics presented in a table at once.

TABLE 1

RN Sampling: Number of Active RN Licenses

Jurisdiction	Number of Active RN Licenses	Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliver-able	Number Received	Online Response	Paper Response	Total Response Rate
AK	13,843	991	36%	2,753	83	971	130 (13.4%)	841 (86.6%)	**36.4%**
AL	68,398	1,051	31%	3,390	22	945	131 (13.9%)	814 (86.1%)	**28.1%**
AR	38,520	1,038	34%	3,053	42	906	131 (14.5%)	775 (85.5%)	**30.1%**
AZ	80,286	1,053	33%	3,191	218	975	137 (14.1%)	838 (86.0%)	**32.8%**
CA	409,971	1,064	35%	3,040	90	946	123 (13.0%)	823 (87.0%)	**32.1%**
CO	69,722	1,051	38%	2,766	191	885	101 (11.4%)	784 (88.6%)	**34.4%**
CT	61,832	1,049	40%	2,623	49	924	88 (9.5%)	836 (90.5%)	**35.9%**
DC	22,700	1,019	31%	3,287	208	894	131 (14.7%)	763 (85.4%)	**29.0%**
DE	18,051	1,008	43%	2,344	73	856	108 (13%)	748 (87.4%)	**37.7%**
FL	285,317	1,063	32%	3,322	161	864	102 (11.8%)	762 (88.2%)	**27.3%**
GA	120,581	1,058	33%	3,206	124	926	135 (14.6%)	791 (85.4%)	**30.0%**
HI	25,246	1,024	40%	2,560	72	911	105 (11.5%)	806 (88.5%)	**36.6%**
IA	51,071	1,045	46%	2,272	72	866	86 (9.9%)	780 (90.1%)	**39.4%**
ID	24,124	1,022	44%	2,323	146	901	136 (15.1%)	765 (85%)	**41.4%**
IL	179,026	1,061	37%	2,868	49	879	106 (12%)	773 (87.9%)	**31.2%**
IN	110,294	1,057	39%	2,710	71	995	102 (10.3%)	893 (89.8%)	**37.7%**
KS	57,738	1,048	44%	2,382	26	847	92 (10.9%)	755 (89.1%)	**36.0%**
KY	66,049	1,050	36%	2,917	30	889	118 (13.3%)	771 (86.7%)	**30.8%**
LA	60,898	1,049	32%	3,278	19	927	119 (12.8%)	808 (87.2%)	**28.4%**
MA	123,507	1,058	35%	3,023	25	1020	90 (8.8%)	930 (91.2%)	**34.0%**
MD	77,007	1,053	38%	2,771	93	842	103 (12.2%)	739 (87.8%)	**31.4%**
ME	23,510	1,021	42%	2,431	46	863	70 (8.1%)	793 (91.9%)	**36.2%**
MI	140,746	1,059	45%	2,353	43	912	96 (10.5%)	816 (89.5%)	**39.5%**
MN	96,086	1,055	46%	2,293	28	959	101 (10.5%)	858 (89.5%)	**42.3%**
MO	98,277	1,056	42%	2,514	42	929	131 (14.1%)	798 (85.9%)	**37.6%**
MS	44,742	1,042	29%	3,593	60	891	137 (15.4%)	754 (84.6%)	**25.2%**
MT	16,361	1,002	51%	1,965	85	832	73 (8.8%)	759 (91.2%)	**44.3%**
NC	125,721	1,058	43%	2,460	61	872	130 (14.9%)	742 (85.1%)	**36.3%**
ND	13,701	990	50%	1,980	38	812	110 (13.6%)	702 (86.5%)	**41.8%**
NE	26,765	1,026	45%	2,280	65	942	111 (11.8%)	831 (88.2%)	**42.5%**
NH	21,459	1,017	44%	2,311	36	853	88 (10.3%)	765 (89.7%)	**37.5%**
NJ	121,452	1,058	39%	2,713	63	809	91 (11.3%)	718 (88.8%)	**30.5%**
NM	25,609	1,024	38%	2,695	120	853	101 (11.8%)	752 (88.2%)	**33.1%**
NV	31,993	1,033	34%	3,038	178	883	137 (15.5%)	746 (84.5%)	**30.9%**

Jurisdiction	Number of Active RN Licenses	Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliver-able	Number Received	Online Response	Paper Response	Total Response Rate
NY	311,395	1,063	37%	2,873	168	958	61 (6.4%)	897 (93.6%)	**35.4%**
OH	199,755	1,061	41%	2,588	86	929	98 (10.6%)	831 (89.5%)	**37.1%**
OK	48,461	1,044	33%	3,164	53	948	137 (14.5%)	811 (85.6%)	**30.5%**
OR	53,256	1,046	41%	2,551	80	924	112 (12.1%)	812 (87.9%)	**37.4%**
PA	193,503	1,061	44%	2,411	12	955	107 (11.2%)	848 (88.8%)	**39.8%**
RI	18,367	1,009	37%	2,727	217	852	72 (8.5%)	780 (91.6%)	**33.9%**
SC	62,328	1,049	35%	2,997	91	935	127 (13.6%)	808 (86.4%)	**32.2%**
SD	16,317	1,002	46%	2,178	52	901	77 (8.6%)	824 (91.5%)	**42.4%**
TN	92,629	1,055	33%	3,197	105	981	136 (13.9%)	845 (86.1%)	**31.7%**
TX	280,813	1,063	32%	3,322	162	872	132 (15.1%)	740 (84.9%)	**27.6%**
UT	29,208	1,029	40%	2,573	52	889	140 (15.8%)	749 (84.3%)	**35.3%**
VA	99,778	1,056	38%	2,779	79	852	131 (15.4%)	721 (84.6%)	**31.6%**
VT	11,604	977	44%	2,220	35	830	88 (10.6%)	742 (89.4%)	**38.0%**
WA	69,319	1,051	41%	2,563	46	970	121 (14.5%)	849 (87.5%)	**38.5%**
WI	94,331	1,055	53%	1,991	39	914	98 (10.7%)	816 (89.3%)	**46.8%**
WV	31,763	1,032	34%	3,035	51	909	104 (11.4%)	805 (88.6%)	**30.5%**
WY	10,161	966	46%	2,100	33	844	103 (12.2%)	741 (87.8%)	**40.8%**
Virgin Islands	1,144	552	29%	844	112	188	51 (27.1%)	137 (72.9%)	**25.7%**
Guam	1,878	680	29%	871	186	164	41 (25.0%)	123 (75.0%)	**23.9%**
American Samoa	110	100	29%	72	2	13	9 (69.2%)	4 (30.8%)	**18.6%**
Northern Mariana Islands	1,550	632	26%	393	58	69	21 (30.4%)	48 (69.6%)	**20.6%**
TOTAL	4,378,273	54,936	39%	140,154	4,698*	46,476	5,716 (12.3%)	40,760 (87.7%)	34.3%

Note. Number of active RN licenses for AL, HI, KS, MA, OK, PA, and WA were obtained from the boards of nursing (BONs). The remaining jurisdictions' license numbers were obtained from NCSBN's National Nursing Database in June 2015. WA's list contained licensees with WA addresses only. The NY sample was acquired through Medical Marketing Service. The remaining jurisdictions' lists were obtained through NCSBN's Nursys database, with permission from BONs.

*Number is undeliverables + 250 lost online surveys.

TABLE 2

LPN/VN Sampling: Number of Active LPN/VN Licenses

Jurisdiction	Number of Active LPN/VN Licenses	Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliver-able	Number Received	Online Response	Paper Response	Total Response Rate
AK	1,051	529	36%	600	34	174	15 (8.6%)	159 (91.4%)	**30.7%**
AL	17,888	1,007	31%	3,248	77	907	108 (11.9%)	799 (88.1%)	**28.6%**
AR	15,448	998	34%	2,935	84	797	77 (9.7%)	720 (90.3%)	**28.0%**
AZ	10,795	971	33%	2,942	312	637	70 (11.0%)	567 (89.0%)	**24.2%**
CA	95,682	1055	35%	3,014	98	655	76 (11.6%)	579 (88.4%)	**22.5%**
CO	8,325	946	38%	2,489	228	575	36 (6.3%)	539 (93.7%)	**25.4%**
CT	13,318	988	40%	2,470	68	552	29 (5.3%)	523 (94.8%)	**23.0%**

Jurisdiction	Number of Active LPN/VN Licenses	Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliver-able	Number Received	Online Response	Paper Response	Total Response Rate
DC	3,062	791	31%	796	78	164	10 (6.1%)	154 (93.9%)	**22.8%**
DE	3,011	788	43%	1,833	68	488	52 (10.7%)	436 (89.3%)	**27.6%**
FL	73,845	1,052	32%	3,288	270	721	74 (10.3%)	647 (89.7%)	**23.9%**
GA	35,866	1,036	33%	3,139	166	716	80 (11.2%)	636 (88.8%)	**24.1%**
HI	2,937	783	40%	1,958	62	583	54 (9.3%)	529 (90.7%)	**30.7%**
IA	11,338	975	46%	2,120	75	654	37 (5.7%)	617 (94.3%)	**32.0%**
ID	4,886	876	44%	1,991	108	616	54 (8.8%)	562 (91.2%)	**32.7%**
IL	26,597	1026	37%	2,773	44	683	50 (7.3%)	633 (92.7%)	**25.0%**
IN	25,830	1025	39%	2,628	59	707	53 (7.5%)	654 (92.5%)	**27.5%**
KS	10,534	969	44%	2,202	47	696	58 (8.3%)	638 (91.7%)	**32.3%**
KY	15,082	997	36%	2,769	57	690	65 (9.4%)	625 (90.6%)	**25.4%**
LA	23,850	1,021	32%	3,191	35	716	79 (11.0%)	637 (89.0%)	**22.7%**
MA	21,471	1,017	35%	2,906	55	737	53 (7.2%)	684 (92.8%)	**25.9%**
MD	13,144	987	38%	2,597	218	551	60 (10.9%)	491 (89.1%)	**23.2%**
ME	2,432	742	42%	1,767	45	575	12 (2.1%)	563 (97.9%)	**33.4%**
MI	24,886	1,023	45%	2,273	68	748	42 (5.6%)	706 (94.4%)	**33.9%**
MN	23,128	1,020	46%	2,217	57	827	51 (6.2%)	776 (93.8%)	**38.3%**
MO	24,377	1,022	42%	2,433	135	713	59 (8.3%)	654 (91.7%)	**31.0%**
MS	14,699	995	29%	3,431	208	673	67 (10.0%)	606 (90.0%)	**20.9%**
MT	2,808	773	51%	1,516	101	594	34 (5.7%)	560 (94.3%)	**42.0%**
NC	21,925	1,018	43%	2,367	91	679	71 (10.5%)	608 (89.5%)	**29.8%**
ND	3,705	828	50%	1,656	58	626	43 (6.9%)	583 (93.1%)	**39.2%**
NE	7,052	927	45%	2,060	113	694	58 (8.4%)	636 (91.6%)	**35.6%**
NH	3,271	805	44%	1,830	44	533	33 (6.2%)	500 (93.8%)	**29.8%**
NJ	24,091	1,022	39%	2,621	105	641	58 (9.1%)	583 (91.0%)	**25.5%**
NM	2,752	769	38%	2,024	103	558	61 (10.9%)	497 (89.1%)	**29.0%**
NV	3,546	820	34%	2,412	259	592	68 (11.5%)	524 (88.5%)	**27.5%**
NY	81,156	1,053	37%	2,846	277	613	39 (6.4%)	574 (93.6%)	**23.9%**
OH	54,882	1,047	41%	2,554	77	714	45 (6.3%)	669 (93.7%)	**28.8%**
OK	18,212	1,008	33%	3,055	93	772	77 (10.0%)	695 (90.0%)	**26.1%**
OR	4,893	876	41%	2,137	89	594	55 (9.3%)	539 (90.7%)	**29.0%**
PA	56,179	1,047	44%	2,380	27	821	54 (6.6%)	767 (93.4%)	**34.9%**
RI	1,881	681	37%	1,758	186	431	24 (5.6%)	407 (94.4%)	**27.4%**
SC	12,139	981	35%	2,803	104	734	65 (8.9%)	669 (91.1%)	**27.2%**
SD	2,460	744	46%	1,617	43	564	25 (4.4%)	539 (95.6%)	**35.8%**
TN	30,126	1,031	33%	3,124	109	763	85 (11.1%)	678 (88.9%)	**25.3%**
TX	100,545	1,056	32%	3,300	194	735	105 (14.3%)	630 (85.7%)	**23.7%**
UT	2,770	770	40%	1,925	101	534	61 (11.4%)	473 (88.6%)	**29.3%**
VA	28,361	1,028	38%	2,705	113	586	58 (9.9%)	528 (90.1%)	**22.6%**
VT	2,087	706	44%	1,605	48	486	23 (4.7%)	463 (95.3%)	**31.2%**
WA	11,954	980	41%	2,390	64	716	58 (8.1%)	658 (91.9%)	**30.8%**
WI	13,619	990	53%	1,868	15	791	63 (8.0%)	728 (92.0%)	**42.7%**
WV	12,886	986	34%	2,900	240	559	41 (7.3%)	518 (92.7%)	**21.0%**

Jurisdiction	Number of Active LPN/VN Licenses	Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliver-able	Number Received	Online Response	Paper Response	Total Response Rate
WY	943	501	46%	886	26	306	17 (5.6%)	289 (94.4%)	**35.6%**
Virgin Islands	152	133	29%	132	10	16	3 (18.8%)	13 (81.3%)	**13.1%**
Guam	357	268	29%	173	38	42	14 (33.3%)	28 (66.7%)	**31.1%**
American Samoa	122	109	29%	96	4	10	4 (40.0%)	6 (60.0%)	**10.9%**
Northern Mariana Islands	64	60	26%	43	5	4	0 (0.0%)	4 (100.0%)	**10.5%**
TOTAL	**1,028,420**	**47,656**	**39%**	**120,793**	**5,493**	**32,263**	**2,763 (8.6%)**	**29,500 (91.4%)**	**28.0%**

Note. Number of active LPN/VN licenses for AL, HI, KS, LA, MA, OK, PA, and WA were obtained from the boards of nursing (BONs). The remaining jurisdictions' license numbers were obtained from NCSBN's National Nursing Database in June 2015. Lists for AL, HI, KS, LA, MA, OK, PA, and WA were obtained directly from the BONs. The NY sample was acquired through Medical Marketing Service. The remaining jurisdictions' lists were obtained through NCSBN's Nursys database, with permission from BONs.

Registered Nurse Results

Age

The average age of all the respondents surveyed was 48.8 (see Table 3), higher than HRSA's (2013) most recently reported average age of 44.6 years but lower than the average age of 50 reported in the 2013 National Workforce Survey of Registered Nurses.

As shown in Table 3, 50% of respondents were age 50 or older, with 12.4% age 65 and older.

TABLE 3

Age Distribution and Gender, by Age

				Age						
n		**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
41,258.6		3,905.2 9.5%	4,098.0 9.9%	3,928.1 9.5%	4,200.7 10.2%	4,398.2 10.7%	4,724.8 11.5%	5,622.4 13.6%	5,254.9 12.7%	5,126.3 12.4%
					Gender					
	n	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Female	35,855.7 91.8%	3,466.8 9.7%	3,567.5 10.0%	3,396.2 9.5%	3,573.0 10.0%	3,735.0 10.4%	4,031.4 11.2%	4,909.6 13.7%	4,609.1 12.9%	4,567.1 12.7%
Male	3,209.1 8.2%	327.8 10.2%	372.1 11.6%	384.6 12.0%	460.8 14.4%	409.7 12.8%	392.8 12.2%	355.0 11.1%	299.9 9.4%	206.4 6.4%

Race/Ethnicity by Age

In terms of race/ethnicity by age-group, larger percentages of minorities were younger as compared to nearing retirement (Table 4). For instance, 29.8% of Hispanic/Latino RNs reported being younger than age 35 and only 10% reported being age 60 or older; 18.9% of White/Caucasian RNs reported being younger than age 35 and 27.1% reported being age 60 or older

TABLE 4

Race/Ethnicity, by Age

		Age								
Race/Ethnicity	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
American Indian or Alaska Native	181.8	8.7 4.8%	18.1 10.0%	14.5 8.0%	23.1 12.7%	33.6 18.5%	13.9 7.6%	19.9 10.9%	31.6 17.4%	18.4 10.1%
Asian	2,696.0	259.0 9.6%	334.1 12.4%	310.9 11.5%	455.8 16.9%	418.3 15.5%	241.6 9.0%	264.7 9.8%	239.9 8.9%	171.6 6.4%
Black/African American	2,282.7	120.4 5.3%	203.8 8.9%	300.7 13.2%	309.5 13.6%	282.0 12.4%	295.5 13.0%	292.6 12.8%	212.9 9.3%	265.3 11.6%
Native Hawaiian or Other Pacific Islander	161.3	17.6 10.9%	26.3 16.3%	33.9 21.0%	21.6 13.4%	29.7 18.4%	6.6 4.1%	14.6 9.1%	6.2 3.8%	4.8 3.0%
White/Caucasian	33,039.2	3,128.3 9.5%	3,110.3 9.4%	2,914.2 8.8%	3,026.8 9.2%	3,300.4 10.0%	3,831.8 11.6%	4,774.6 14.5%	4,511.7 13.7%	4,441.2 13.4%
Hispanic/Latino	1,475.3	237.7 16.1%	201.3 13.7%	192.1 13.0%	208.3 14.1%	205.7 14.0%	183.0 12.4%	99.9 6.8%	84.5 5.7%	62.7 4.3%
Other	330.7	30.2 9.1%	36.2 10.9%	22.5 6.8%	39.3 11.9%	33.8 10.2%	35.1 10.6%	37.6 11.4%	59.5 18.0%	36.6 11.1%
Mixed	882.2	99.9 11.3%	136.7 15.5%	130.7 14.8%	106.5 12.1%	82.9 9.4%	86.1 9.8%	87.3 9.9%	70.4 8.0%	81.8 9.3%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Initial Nursing Education by Age

An examination of initial nursing education by age-group revealed that most younger nurses have completed studies at the baccalaureate level (Table 5). In the older-than-age 45 groups, more nurses have completed their degree at the associate level. DNP graduates are most prevalent in the 40–44 age-group, and PhD nursing degrees are most prevalent in the 45–49 age-group (nurses younger than age 35 were least likely to pursue doctoral education).

TABLE 5

Initial Nursing Education, by Age

		Age								
Initial Nursing Education	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Vocational/practical certificate-nursing	2195.98	84.6 3.9%	169.2 7.7%	218.1 9.9%	211.3 9.6%	305.7 13.9%	236.2 10.76	341.7 15.6%	333.9 15.2%	295.2 13.4%
Diploma	5703.54	75.0 1.3%	100.8 1.8%	161.1 2.8%	216.3 3.8%	278.0 4.9%	580.7 10.2%	969.3 17.0%	1157.6 20.3%	2164.9 38.0%
ADN	15794.7	1,194.5 7.6%	1,462.4 9.3%	1,700.3 10.8%	1,794.1 11.4%	1,950.4 12.4%	1,998.7 12.7%	2,234.1 14.1%	1,997.4 12.7%	1,463.0 9.3%
BSN	16101.6	2,463.2 15.3%	2,151.9 13.4%	1,654.7 10.3%	1,788.8 11.1%	1,714.4 10.7%	1,748.1 10.9%	1,925.1 12.0%	1,600.8 9.9%	1,054.6 6.6%
MSN	1079.17	72.5 6.7%	188.9 17.5%	161.1 14.9%	134.1 12.4%	103.9 9.6%	124.7 11.6%	113.3 10.5%	106.4 9.9%	74.3 6.9%
DNP	32.2884	0.5 1.4%	2.9 8.9%	0 0.0%	9.7 30.0%	5.3 16.6%	6.5 20.1%	0.6 2.0%	6.7 20.6%	0.1 0.5%
PhD-nursing	12.1207	0 0.0%	0 0.0%	2.0 16.6%	0.8 6.5%	3.7 30.7%	1.5 12.0%	1.9 16.0%	0.7 6.1%	1.5 12.2%

		Age								
Initial Nursing Education	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Doctoral-nursing	9.82834	0	0.5	0	1.5	1.4	0.3	5.2	0.3	0.6
other		0.0%	5.0%	0.0%	15.3%	14.3%	3.4%	52.7%	2.8%	6.4%

Employment Status by Age

An analysis of age-group by employment status revealed a gradual decline in employment as nurses age. While there is some fluctuation, over 91% of nurses younger than age 50 remain employed. After age 50, more significant drop-offs in employment occur as nurses age (Table 6). The rates of unemployed nurses and those seeking work as a nurse were relatively similar across age-groups.

When comparing results to 2013, from younger than 30 to 49 age cohorts, the percentage employed in nursing is consistent with 2013 data. From 50+, the current study's percentages show a drop-off in percentage employed in nursing when compared to 2013 data. For instance, in 2013, 47% of those age 65 and older were employed in nursing, while in 2015 40.1% were employed in nursing.

TABLE 6

Age, by Employment Status

	Age								
Employment Status	**Younger Than 30 (*n* = 3,902.6)**	**30-34 (*n* = 4,097.6)**	**35-39 (*n* = 3,920.9)**	**40-44 (*n* = 4,200.7)**	**45-49 (*n* = 4,388.9)**	**50-54 (*n* = 4,715.5)**	**55-59 (*n* = 5,616.6)**	**60-64 (*n* = 5,252.2)**	**65 and Older (*n* = 5,114.5)**
Employed in nursing (overall)	3,701.5 94.8%	3,777.7 92.2%	3,571.3 91.1%	3,867.0 92.1%	4,006.2 91.3%	4,138.5 87.8%	4,769.7 84.9%	3,775.6 71.9%	2,051.6 40.1%
Full time	3,185.4 81.6%	2,902.0 70.8%	2,809.9 71.7%	3,113.1 74.1%	3,305.0 75.3%	3,329.5 70.6%	3,807.7 67.8%	2,780.7 52.9%	929.5 18.2%
Part time	338.8 8.7%	587.3 14.3%	540.2 13.8%	563.6 13.4%	521.9 11.9%	651.5 13.8%	755.1 13.4%	746.5 14.2%	707.7 13.8%
Per diem	305.7 7.8%	414.2 10.1%	368.8 9.4%	318.9 7.6%	302.4 6.9%	272.4 5.8%	429.4 7.6%	429.7 8.2%	516.2 10.1%
Employed in other field*	40.1 1.0%	58.0 1.4%	113.1 2.9%	120.7 2.9%	141.9 3.2%	202.9 4.3%	287.7 5.1%	259.5 4.9%	174.1 3.4%
Unemployed, seeking work as a nurse	81.5 2.1%	90.0 2.2%	101.2 2.6%	94.0 2.2%	95.3 2.2%	140.2 3.0%	129.7 2.3%	118.5 2.3%	89.6 1.8%

Note. Columns do not sum to age *n*'s and percentages do not sum to 100% because the employment status question had additional response options and respondents could select multiple options. Some respondents may have selected "actively employed in nursing"; however, they may not have specified full time or part time. Hence, those numbers will not sum to "actively employed in nursing" totals.

*Is not employed in nursing.

Employment Setting by Age and Hours Worked

An analysis of average hours worked in nursing per week by employment status and age-group revealed that, on average, full-time and part-time RNs worked 41.6 and 25.1 hours per week, respectively. Other than part-time nurses age 65 and older, the current study showed that the number of weekly hours worked by full-time and part-time RNs was consistent across all age-groups.

An analysis of primary employment setting by age-group revealed that RNs had a steady though gradual decline in the percent employed in hospitals as age increased (Table 7). The older nurse tended to be employed in academic, community, occupational health, and non–direct care settings, such as policy, planning, and regulatory. The current study found that 79% of RNs younger than age 30 worked in hospitals; this percentage declined with age, where 46% of RNs age 55 and older worked in hospitals.

TABLE 7

Primary Employment Setting, by Age

		Age								
Primary Employment Setting	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Academic	1,186.2	25.0 2.1%	68.9 5.8%	102.3 8.6%	1,39.0 11.7%	114.8 9.7%	149.6 12.6%	219.0 18.5%	236.2 19.9%	131.4 11.1%
Ambulatory care	3,776.3	190.2 5.0%	405.1 10.7%	362.0 9.6%	460.6 12.2%	479.7 12.7%	502.1 13.3%	594.8 15.8%	509.3 13.5%	272.5 7.2%
Assisted living	200.7	24.0 12.0%	21.3 10.6%	21.5 10.7%	15.3 7.6%	25.4 12.7%	23.5 11.7%	19.2 9.6%	28.8 14.3%	21.8 10.9%
Community health	679.2	41.4 6.1%	70.9 10.4%	90.9 13.4%	64.8 9.5%	74.9 11.0%	76.4 11.3%	91.2 13.4%	96.8 14.3%	72.0 10.59%
Correctional	226.0	4.5 2.0%	24.1 10.7%	18.1 8.0%	27.7 12.2%	31.4 13.9%	41.0 18.1%	31.9 14.1%	31.6 14.0%	15.8 7.0%
Home health	2,020.5	133.8 6.6%	185.1 9.2%	166.8 8.3%	205.2 10.2%	265.9 13.2%	282.4 14.0%	321.6 15.9%	270.7 13.4%	189.0 9.4%
Hospital	18,360.6	2,850.6 15.5%	2,466.8 13.4%	2,138.8 11.7%	2,138.4 11.7%	2,116.1 11.5%	2,119.5 11.6%	2211.6 12.1%	1,603.8 8.7%	715.0 3.9%
Insurance	600.5	18.1 3.0%	36.1 6.0%	70.7 11.8%	83.3 13.9%	65.2 10.9%	79.5 13.2%	126.0 21.0%	88.4 14.7%	33.3 5.5%
Nursing home/extended care	1,617.0	157.6 9.8%	136.2 8.4%	115.5 7.1%	174.9 10.8%	214.6 13.3%	222.9 13.8%	224.1 13.9%	215.7 13.3%	155.6 9.6%
Occupational health	220.9	11.4 5.2%	7.1 3.2%	18.5 8.4%	18.6 8.4%	28.9 13.1%	21.1 9.5%	28.2 12.8%	38.3 17.3%	48.9 22.1%
Policy/regulatory/licensing	139.9	0 0.0%	11.0 7.9%	6.9 5.0%	23.7 16.9%	12.7 9.1%	30.9 22.1%	21.7 15.5%	20.2 14.5%	12.7 9.1%
Public health	514.7	43.4 8.4%	34.8 6.8%	49.0 9.5%	43.8 8.5%	74.0 14.4%	75.2 14.6%	82.2 16.0%	72.1 14.0%	40.3 7.8%
School health	962.1	16.1 1.7%	41.1 4.3%	77.4 8.0%	101.0 10.5%	109.1 11.3%	132.8 13.8%	243.8 25.3%	159.0 16.5%	82.0 8.5%
Other	2,999.4	180.9 6.0%	230.3 7.7%	297.2 9.9%	344.0 11.5%	357.0 11.9%	349.5 11.7%	498.7 16.6%	407.9 13.6%	334.1 11.1%

Position Title by Age

A comparison of position titles by age-group suggested that the largest percentage of RNs with a principal position title of "nurse executive" (22.2%) was in the 60–64 age-group (Table 8). "Advanced practice nurse" was most common for the 30–34 and 35–39 age-groups. "Nurse faculty" was primarily represented by the 55–59 and 60–64 age-groups (14.8% each).

TABLE 8

Primary Position Title, by Age

		Age								
Primary Position Title	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Advanced practice nurse	2,694.8	138.5 5.1%	354.0 13.1%	360.4 13.4%	376.5 14.0%	304.6 11.3%	303.6 11.3%	350.6 13.0%	315.4 11.7%	191.2 7.1%
Case manager	2,222.1	99.1 4.5%	163.9 7.4%	163.2 7.4%	235.3 10.6%	316.2 14.2%	307.1 13.8%	426.4 19.2%	336.2 15.1%	174.8 7.9%
Clinical nurse leader	1,374.2	76.2 5.6%	104.2 7.6%	138.9 10.1%	163.9 11.9%	170.0 12.4%	224.7 16.4%	233.3 17.0%	187.0 13.6%	76.1 5.5%

		Age								
Primary Position Title	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Consultant	592.7	11.4 1.9%	32.9 5.6%	43.9 7.4%	57.0 9.6%	65.6 11.1%	78.5 13.3%	103.2 17.4%	100.6 17.0%	99.7 16.8%
Nurse executive	789.0	0.9 0.12%	20.1 2.5%	53.1 6.7%	72.3747 9.2%	115.4 14.6%	132.1 16.7%	145.1 18.4%	174.8 22.2%	75.2 9.5%
Nurse faculty	1,280.7	120.6 9.4%	138.1 10.8%	116.2 9.1%	128.6 10.0%	134.8 10.5%	135.3 10.6%	189.0 14.8%	189.1 14.8%	129.0 10.1%
Nurse manager	2,727.0	112.2 4.1%	214.1 7.9%	261.3 9.6%	367.1 13.5%	338.0 12.4%	414.0 15.2%	452.7 16.6%	373.3 13.7%	194.4 7.1%
Nurse researcher	215.3	5.8 2.7%	10.7 5.0%	15.2 7.1%	34.4 16.0%	27.2 12.6%	35.5 16.5%	37.3 17.3%	21.3 9.9%	27.8 12.9%
Other-health related	1,926.0	54.1 2.8%	82.0 4.3%	183.8 9.5%	199.9 10.4%	232.8 12.1%	289.0 15.0%	397.1 20.6%	301.1 15.6%	186.2 9.7%
Other-not health related	220.2	4.0 1.8%	31.2 14.2%	19.5 8.9%	21.4 9.7%	19.2 8.7%	37.3 16.9%	32.0 14.5%	33.4 15.2%	22.2 10.1%
Staff nurse	19,755.6	3,073.0 15.6%	2,572.1 13.0%	2,210.0 11.2%	2,202.5 11.2%	2,284.9 11.6%	2,212.4 11.2%	2,432.5 12.3%	1,805.8 9.1%	962.4 4.9%

Employment Specialty by Age

Primary employment specialty was also compared across age-groups (Table 9). The youngest nurses tended to work in acute care/critical care and specialty settings, while older nurses were more common in community settings, such as school health, community health, and public health. Anesthesiology, emergency/trauma, neonatal, neurology/neurosurgery, and women's health were more commonly the choice of nurses age 30 to 44.

TABLE 9

Primary Employment Specialty, by Age

		Age								
Primary Employment Specialty	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Acute care/critical care	3,746.6	636.9 17.0%	558.4 14.9%	486.7 13.0%	455.1 12.1%	442.8 11.8%	379.8 10.1%	359.3 9.6%	289.3 7.7%	138.3 3.7%
Adult health/family health	658.4	42.0 6.4%	61.0 9.3%	76.5 11.6%	61.7 9.4%	95.1 14.4%	86.7 13.2%	95.6 14.5%	85.1 12.9%	54.6 8.3%
Anesthesia	480.7	23.3 4.8%	75.8 15.8%	57.5 12.0%	67.1 14.0%	52.9 11.0%	68.4 14.2%	50.7 10.5%	51.7 10.8%	33.3 6.9%
Community	306.7	15.5 5.1%	18.4 6.0%	37.2 12.1%	22.6 7.4%	26.5 8.7%	50.1 16.3%	48.5 15.8%	47.1 15.4%	40.8 13.3%
Emergency/trauma	1,856.9	268.8 14.5%	298.5 16.1%	273.2 14.7%	266.3 14.3%	213.5 11.5%	166.8 9.0%	203.1 10.9%	113.0 6.1%	53.8 2.9%
Genetics	33.4	0.4 1.0%	9.3 27.7%	2.4 7.2%	0.5 1.6%	1.3 4.0%	6.0 17.9%	3.5 10.4%	5.8 17.5%	4.3 12.7%
Geriatric/gerontology	1,561.9	129.4 8.3%	112.0 7.2%	127.9 8.2%	155.0 9.9%	186.6 12.0%	218.2 14.0%	230.4 14.8%	227.5 14.6%	174.9 11.2%
Home health	1,430.2	79.5 5.6%	117.2 8.2%	120.5 8.4%	158.9 11.1%	190.1 13.3%	203.8 14.3%	249.3 17.4%	184.2 12.9%	126.7 8.9%
Informatics	291.1	8.9 3.1%	38.0 13.1%	31.2 10.7%	37.7 13.0%	27.5 9.5%	47.9 16.5%	36.7 12.6%	50.5 17.3%	12.7 4.4%
Maternal-child health	1,476.3	155.1 10.5%	180.1 12.2%	168.4 11.4%	213.0 14.4%	187.8 12.7%	159.8 10.8%	198.3 13.4%	148.8 10.1%	64.7 4.4%

		Age								
Primary Employment Specialty	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Medical-surgical	3,353.4	645.0 19.2%	392.0 11.7%	356.5 10.6%	384.1 11.5%	365.1 10.9%	381.0 11.4%	378.9 11.3%	293.5 8.8%	157.3 4.7%
Neonatal	734.8	93.8 12.8%	127.4 17.3%	109.7 14.9%	72.4 9.9%	65.9 9.0%	105.3 14.3%	78.6 10.7%	65.6 8.9%	16.1 2.2%
Nephrology	434.5	19.0 4.4%	50.0 11.5%	37.0 8.5%	54.3 12.5%	70.3 16.2%	67.1 15.4%	60.3 13.9%	41.7 9.6%	34.9 8.0%
Neurology/ neurosurgical	311.1	76.1 24.5%	50.1 16.1%	34.8 11.2%	41.8 13.5%	34.1 11.0%	35.1 11.3%	18.8 6.1%	18.8 6.1%	1.5 0.5%
Occupational health	250.2	5.4 2.2%	8.3 3.3%	18.6 7.4%	19.5 7.8%	35.8 14.3%	27.1 10.8%	42.7 17.1%	47.4 19.0%	45.4 18.1%
Oncology	908.7	122.5 13.5%	93.5 10.3%	80.4 8.9%	92.8 10.2%	120.4 13.3%	125.9 13.9%	152.3 16.8%	81.0 8.9%	40.0 4.4%
Orthopedic	401.4	61.4 15.3%	43.4 10.8%	54.3 13.5%	66.6 16.6%	50.1 12.5%	39.2 9.8%	36.2 9.0%	30.4 7.6%	19.8 4.9%
Palliative care/hospice	476.4	23.1 4.9%	36.9 7.7%	49.0 10.3%	53.2 11.2%	64.7 13.6%	59.5 12.5%	88.5 18.6%	60.5 12.7%	41.0 8.6%
Pediatrics	1,425.8	259.5 18.2%	227.5 16.0%	134.6 9.4%	141.1 9.9%	161.3 11.3%	146.1 10.3%	174.5 12.2%	122.0 8.6%	59.2 4.2%
Perioperative	1,986.7	143.7 7.2%	185.0 9.3%	180.0 9.1%	242.0 12.2%	289.3 14.6%	299.1 15.1%	301.7 15.2%	251.2 12.6%	94.7 4.8%
Primary care	952.0	51.1 5.4%	115.2 12.1%	109.4 11.5%	105.1 11.0%	136.5 14.3%	125.1 13.1%	148.5 15.6%	109.5 11.5%	51.6 5.4%
Psychiatric/mental health/substance abuse	1,265.2	95.4 7.5%	107.4 8.5%	108.0 8.5%	133.6 10.6%	146.8 11.6%	147.8 11.7%	191.3 15.1%	184.8 14.6%	150.3 11.9%
Public health	403.9	22.5 5.6%	21.9 5.4%	29.5 7.3%	72.5 17.9%	54.8 13.6%	51.7 12.8%	55.9 13.8%	65.4 16.2%	29.8 7.4%
Radiology	178.8	8.1 4.5%	15.6 8.7%	10.8 6.1%	14.9 8.4%	30.0 16.8%	35.9 20.1%	34.5 19.3%	18.0 10.1%	11.0 6.1%
Rehabilitation	652.4	87.7 13.4%	74.9 11.5%	61.9 9.5%	62.5 9.6%	86.1 13.2%	93.5 14.3%	93.1 14.3%	62.5 9.6%	30.5 4.7%
School health	909.7	17.3 1.9%	33.4 3.7%	77.1 8.5%	91.5 10.1%	105.3 11.6%	124.1 13.7%	234.0 25.7%	144.4 15.9%	82.6 9.1%
Urologic	77.9	8.0 10.2%	13.0 16.7%	8.7 11.2%	3.5 4.5%	0.3 0.4%	6.9 8.9%	8.0 10.2%	12.8 16.4%	16.7 21.5%
Women's health	588.2	78.2 13.3%	107.6 18.3%	75.3 12.8%	70.5 12.0%	55.2 9.4%	46.2 7.9%	58.3 9.9%	66.0 11.2%	31.0 5.3%
Other	5,590.4	320.6 5.7%	446.1 8.0%	518.1 9.3%	561.3 10.0%	625.5 11.2%	778.3 13.9%	1,046.7 18.7%	819.7 14.7%	474.3 8.5%

Additional Nursing Positions by Age

Over 15.2% of RNs reported working in more than one nursing position, which was approximately the same percentage as in 2013. The 55–59 age-group had the most RNs working in secondary nursing positions (13.6%) and the 35–39 age-group had the least (9.5%).

Gender

Study respondents (n = 43,331) were predominantly female (92%); 8% were male.

Initial Education and Highest Level of Education by Gender

Results of initial nursing education by gender indicated that men were least prevalent in the diploma group (4.8%) and DNP group (1.5%) (Table 10).

TABLE 10

Initial Nursing Education of RNs Employed in Nursing, by Gender

		Gender	
Initial Nursing Education	***n***	**Men**	**Women**
Vocational/practical certificate-nursing	1,878.9	164.0 8.7%	1,714.9 91.3%
Diploma	3,806.2	183.1 4.8%	3,623.1 95.2%
ADN	13,788.3	1,327.6 9.6%	12,460.7 90.4%
BSN	14,244.0	1,212.0 8.5%	13,032.0 91.5%
MSN	1,100.7	81.5 7.4%	1,019.2 92.6%
DNP	42.5	0.6 1.5%	41.8 98.5%
PhD-nursing	12.5	0.7 5.9%	11.8 94.1%
Doctoral-nursing other	13.7	2.5 17.8%	11.3 82.2%

In terms of highest level of education, the degrees with the highest proportion of men were as follows: Doctoral-nursing other (27.8%), Doctoral-other field (22.0%), Associate's-other field (14.9%), Baccalaureate-other field (14.8%), and Master's-other field (14.6%) (Table 11).

TABLE 11

Highest Level of Education of RNs Employed in Nursing, by Gender

		Gender	
Highest Level of Education	***n***	**Men**	**Women**
Vocational/practical certificate-nursing	--	--	--
Diploma	1,954.3	72.0 3.7%	1,882.3 96.3%
ADN	8,966.6	724.3 8.1%	8,242.2 91.9%
Associate's-other field	160.1	23.8 14.9%	136.3 85.1%
BSN	13,443.3	988.3 7.4%	12,454.9 92.7%
Baccalaureate-other field	2,277.5	337.5 14.8%	1,940.1 85.2%
MSN	5,006.1	422.4 8.4%	4,583.6 91.6%
Master's-other field	1,345.8	196.5 14.6%	1,149.4 85.4%
DNP	311.7	25.3 8.1%	286.3 91.9%
PhD-nursing	192.4	10.8 5.6%	181.7 94.4%

		Gender	
Highest Level of Education	***n***	**Men**	**Women**
Doctoral-nursing other	19.2	5.3 27.8%	13.9 72.2%
Doctoral-other field	203.7	44.8 22.0%	158.9 78.0%

Year Licensed by Gender

An examination of year licensed cohort by gender revealed a trend toward an increase in the proportion of males in the workforce (Table 12). Specifically, for respondents licensed prior to 2000, 5.8% were male, while of those licensed between 2013 and 2015, 14.1% were male.

TABLE 12

Year Licensed, by Gender

	Year Licensed			
Gender	**Licensed Prior to 2000 (*n* = 21,190.9)**	**Licensed 2000-2009 (*n* = 8,251.0)**	**Licensed 2010-2012 (*n* = 3,865.7)**	**Licensed 2013-2015 (*n* = 3,127.5)**
Female	19,966.7 94.2%	7,440.4 90.2%	3,370.5 87.2%	2,688.1 86.0%
Male	1,224.2 5.8%	810.5 9.8%	495.2 12.8%	439.5 14.1%

Employment Setting, Title, and Specialty by Gender

An analysis of primary employment setting by gender indicated that the proportion of men, relative to women, were highest in the following employment settings: assisted living facility (12.0%), correctional facility (15.1%), and hospital (10.5%) (Table 13).

TABLE 13

Primary Employment Setting, by Gender

		Gender	
Primary Employment Setting	***n***	**Men**	**Women**
Academic	1,264.8	80.7 6.4%	1,184.1 93.6%
Ambulatory care	3,973.7	205.6 5.2%	3,768.0 94.8%
Assisted living	220.4	26.4 12.0%	194.0 88.0%
Community health	725.6	42.2 5.8%	683.4 94.2%
Correctional	240.1	36.1 15.1%	204.0 85.0%
Home health	2,141.9	160.7 7.5%	1,981.2 92.5%
Hospital	19,088.4	2,007.3 10.5%	17,081.1 89.5%
Insurance	627.6	27.3 4.4%	600.2 95.6%
Nursing home/extended care	1,711.1	129.9 7.6%	1,581.2 92.4%

		Gender	
Primary Employment Setting	***n***	**Men**	**Women**
Occupational health	228.7	15.9 7.0%	212.8 93.1%
Policy/regulatory/licensing	138.0	11.8 8.6%	126.2 91.5%
Public health	572.3	23.6 4.1%	548.7 95.9%
School health	1,031.7	11.5 1.1%	1,020.2 98.9%
Other	3,101.9	234.9 7.6%	2,867.0 92.4%

An analysis of primary position title by gender indicated that the position titles with the highest proportion of men, relative to women were: "advanced practice nurse" (11.9%), followed by "staff nurse" (9.3%), and "clinical nurse leader" (8.9%) (Table 14). The job titles with the highest proportion of women, relative to men, were "case manager" (95.1%) and "nurse researcher" (94.4%).

TABLE 14

Primary Position Title, by Gender

		Gender	
Position Title	***n***	**Men**	**Women**
Advanced practice nurse	2,896.5	345.1 11.9%	2,551.4 88.1%
Case manager	2,326.1	113.0 4.9%	2,213.0 95.1%
Clinical nurse leader	1,370.7	122.4 8.9%	1,248.2 91.1%
Consultant	630.6	44.6 7.1%	586.0 92.9%
Nurse executive	843.0	64.3 7.6%	778.8 92.4%
Nurse faculty	1,319.2	86.0 6.5%	1,233.2 93.5%
Nurse manager	2,882.2	215.7 7.5%	2,666.6 92.5%
Nurse researcher	236.9	13.2 5.6%	223.7 94.4%
Staff nurse	20,632.8	1,919.4 9.3%	18,713.4 90.7%
Other–health related	2,014.5	120.5 6.0%	1,894.0 94.0%
Other–not health related	220.2	5.9 2.7%	214.3 97.3%

An analysis of primary employment specialty by gender indicated that the proportion of men, relative to women, was highest in the following employment specialties: anesthesia, emergency/trauma, acute care/critical care, psychiatric/mental health/substance abuse, nephrology, rehabilitation, and informatics (Table 15). The proportion of men, relative to women, was lowest in the following employment specialties: maternal-child health, neonatal, school health, and women's health.

TABLE 15

Primary Employment Specialty, by Gender

		Gender	
Primary Employment Specialty	***n***	**Men**	**Women**
Acute care/critical care	3,885.7	591.1 15.2%	3,294.7 84.8%
Adult health/family health	708.4	50.2 7.1%	658.2 92.9%
Anesthesia	529.6	170.3 32.2%	359.2 67.8%
Community	337.9	19.5 5.8%	318.4 94.2%
Emergency/trauma	1,867.4	332.7 17.8%	1,534.7 82.2%
Genetics	35.3	1.7 4.7%	33.6 95.3%
Geriatric/gerontology	1,657.3	93.0 5.6%	1,564.2 94.4%
Home health	1,493.3	125.2 8.4%	1,368.1 91.6%
Informatics	298.3	31.9 10.7%	266.5 89.3%
Maternal-child health	1,537.6	3.1 0.2%	1,534.4 99.8%
Medical-surgical	3,486.5	327.6 9.4%	3,158.9 90.6%
Neonatal	769.1	14.4 1.9%	754.8 98.1%
Nephrology	443.9	52.3 11.8%	391.6 88.2%
Neurology/neurosurgical	318.6	24.3 7.6%	294.3 92.4%
Occupational health	258.8	11.5 4.5%	247.3 95.5%
Oncology	989.8	47.8 4.8%	942.0 95.2%
Orthopedic	407.8	26.1 6.4%	381.7 93.6%
Palliative care/hospice	491.0	13.3 2.7%	477.7 97.3%
Pediatrics	1,469.8	33.8 2.3%	1,436.0 97.7%
Perioperative	2,051.8	159.1 7.8%	1,892.7 92.3%
Primary care	1,005.3	74.6 7.4%	930.7 92.6%
Psychiatric/mental health/substance abuse	1,337.3	189.4 14.2%	1,148.0 85.8%
Public health	445.4	30.9 6.9%	414.6 93.1%
Radiology	185.6	15.7 8.5%	170.0 91.5%

		Gender	
Primary Employment Specialty	***n***	**Men**	**Women**
Rehabilitation	687.5	80.7 11.7%	606.8 88.3%
School health	965.9	11.3 1.2%	954.7 98.8%
Urologic	75.5	4.1 5.5%	71.4 94.5%
Women's health	621.3	3.0 0.5%	618.3 99.5%
Other	5,820.9	411.7 7.1%	5,409.2 92.9%

Race/Ethnicity

The current study found that 19.5% of responding RNs identified themselves with a minority population (Table 16).

TABLE 16

Race/Ethnicity

	(*n* = 45,989.3)	Percentage
American Indian or Alaska Native	198.5	0.4%
Asian	3,053.0	6.6%
Black/African American	2,549.9	5.5%
Native Hawaiian or Other Pacific Islander	171.8	0.4%
White/Caucasian	37,003.0	80.5%
Hispanic/Latino	1,654.0	3.6%
Other	390.8	0.8%
Mixed	968.4	2.1%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Advanced Practice Registered Nurses by Race/Ethnicity

An examination of advanced practice preparation by race/ethnicity revealed that the specialty with the highest level of diversity was certified nurse midwife (79.3% White/Caucasian), while the specialty with the lowest level of diversity was certified registered nurse anesthetist (97.9% White/Caucasian) (Table 17).

TABLE 17

Advanced Practice Preparation of RNs, by Race/Ethnicity

		Race/Ethnicity							
Advanced Practice Preparation	***n***	**American Indian or Alaska Native**	**Asian**	**Black/ African American**	**Native Hawaiian or Other Pacific Islander**	**White/ Caucasian**	**Hispanic/ Latino**	**Other**	**Mixed**
Nurse practitioner	2,862.1	5.5 0.2%	170.7 6.0%	185.4 6.5%	11.5 0.4%	2,280.1 79.7%	112.2 3.9%	15.1 0.5%	81.7 2.9%
Clinical nurse specialist	463.1	0.8 0.2%	32.8 7.1%	22.1 4.8%	0.1 0.0%	389.6 84.1%	14.5 3.1%	1.9 0.4%	1.2 0.3%

Advanced Practice Preparation	*n*	Race/Ethnicity							
		American Indian or Alaska Native	Asian	Black/ African American	Native Hawaiian or Other Pacific Islander	White/ Caucasian	Hispanic/ Latino	Other	Mixed
Certified registered nurse anesthetist	512.0	3.5 0.8%	12.1 2.6%	20.0 4.3%	1.2 0.3%	453.4 97.9%	3.9 0.8%	8.0 1.7%	9.9 2.1%
Certified nurse midwife	136.0	0.0 0.0%	11.3 8.3%	4.9 3.6%	0.1 0.0%	107.8 79.3%	7.8 5.7%	0.4 0.3%	3.7 2.7%

Note. In some states, the position title of "clinical nurse specialist" (CNS) is not legally limited to RNs who have CNS preparation of certification. Respondents that indicated "Clinical nurse specialist" without a master's degree or higher were removed from this analysis. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Year Licensed by Race/Ethnicity

As compared to those licensed prior to 2000, newly licensed nurses were more likely to have a more diverse racial/ethnic composition. In particular, the most recent licensed cohort showed increased percentages of RNs of Asian and Hispanic/Latino descent (Table 18).

TABLE 18

Year Licensed, by Race/Ethnicity

Race/Ethnicity	Year Licensed			
	Licensed Prior to 2000 (*n* = 22,505.7)	Licensed 2000-2009 (*n* = 8,566.7)	Licensed 2010-2012 (*n* = 4,043.8)	Licensed 2013-2015 (*n* = 3,262.4)
American Indian or Alaska Native	100.8 0.4%	40.0 0.5%	14.2 0.4%	9.8 0.3%
Asian	993.3 4.4%	956.2 11.2%	312.9 7.7%	246.7 7.6%
Black/African American	1,055.1 4.7%	633.3 7.4%	232.4 5.7%	145.4 4.5%
Native Hawaiian or Other Pacific Islander	46.3 0.2%	47.8 0.6%	25.7 0.6%	14.8 0.5%
White/Caucasian	19,327.3 85.9%	6,185.8 72.2%	3,067.8 75.9%	2,434.0 74.6%
Hispanic/Latino	477.6 2.1%	428.7 5.0%	228.2 5.6%	274.7 8.4%
Other	172.6 0.8%	45.4 0.5%	45.6 1.1%	38.7 1.2%
Mixed	332.8 1.5%	229.5 2.7%	117.0 2.9%	98.3 3.0%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Position Title by Race/Ethnicity

An examination of primary position title by race/ethnicity found that nurse faculty had the least diversity and staff nurse had the most diversity. Specifically, 85.5% of nurse faculty identified as White/Caucasian, while this percentage dropped to 76.9% for staff nurse (Table 19).

TABLE 19

Primary Position Title, by Race/Ethnicity

		Race/Ethnicity							
Primary Position Title	***n***	**American Indian or Alaska Native**	**Asian**	**Black/ African American**	**Native Hawaiian or Other Pacific Islander**	**White/ Caucasian**	**Hispanic/ Latino**	**Other**	**Mixed**
Advanced practice nurse	3,054.0	8.9 0.3%	125.3 4.1%	144.3 4.7%	5.9 0.2%	2,567.0 84.1%	97.2 3.2%	26.2 0.9%	79.3 2.6%
Case manager	2,520.3	21.2 0.8%	140.9 5.6%	178.2 7.1%	1.4 0.1%	2,003.9 79.5%	100.7 4.0%	32.6 1.3%	41.5 1.6%
Clinical nurse leader	1,507.3	15.7 1.0%	79.4 5.3%	92.3 6.1%	1.5 0.1%	1,219.9 80.9%	55.6 3.7%	12.8 0.8%	30.2 2.0%
Consultant	670.1	1.4 0.2%	25.0 3.7%	29.8 4.4%	5.1 0.8%	564.9 84.3%	13.5 2.0%	14.3 2.1%	16.0 2.4%
Nurse executive	875.0	6.0 0.7%	37.0 4.2%	58.0 6.6%	1.4 0.2%	727.3 83.1%	16.9 1.9%	2.0 0.2%	26.2 3.0%
Nurse faculty	1,414.6	8.0 0.6%	30.1 2.1%	90.0 6.4%	8.1 0.6%	1,209.7 85.5%	31.2 2.2%	6.9 0.5%	30.5 2.2%
Nurse manager	3,037.6	20.3 0.7%	137.9 4.5%	198.6 6.5%	10.5 0.3%	2,489.8 82.0%	115.4 3.8%	27.1 0.9%	38.1 1.3%
Nurse researcher	246.9	1.3 0.5%	6.8 2.7%	14.3 5.8%	0.0 0.0%	203.9 82.6%	14.7 5.9%	1.2 0.5%	4.9 2.0%
Other-health related	2,142.2	2.1 0.1%	97.1 4.5%	103.8 4.8%	10.0 0.5%	1,805.8 84.3%	65.8 3.1%	5.3 0.2%	52.3 2.4%
Other-not health related	241.4	0.4 0.2%	16.6 6.9%	11.6 4.8%	6.7 2.8%	188.9 78.3%	11.0 4.6%	0.5 0.2%	5.7 2.3%
Staff nurse	21,799.6	85.8 0.4%	2014.2 9.2%	1221.4 5.6%	105.1 0.5%	16762.0 76.9%	957.1 4.4%	194.2 0.9%	459.6 2.1%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options they were coded as Mixed Race/Ethnicity.

Education

The current study found an increase in the percentage of respondents with a BSN as their initial nursing education. Specifically, in 2013, 36% indicated a BSN as their initial nursing education, while in 2015 39.0% indicated this. Additionally, in the current study, almost 42% of RNs held either a BSN (39.0%) or graduate degree (3.0%) as their initial credential (Table 20). In comparison, in 2013, approximately 39% of RNs held either a BSN (36%) or graduate degree (3.0%)

TABLE 20

Type of Nursing Degree/Credential That Qualified Respondents for First U.S. Nursing License

	(*n* = 45,835.8)	**Percentage**
Vocational/practical certificate-nursing	2,442.1	5.3%
Diploma-nursing	6,539.3	14.3%
ADN	17,625.9	38.5%
BSN	17,853.4	39.0%
MSN	1,297.9	2.8%
Doctoral degree-nursing (DNP)	45.6	0.1%
Doctoral degree-nursing (PhD)	14.8	0.0%

	(*n* = 45,835.8)	Percentage
Doctoral degree-nursing other	17.0	0.0%

Level of Education

When asked to indicate highest level of education, 65% of respondents in the current study indicated that they had obtained a baccalaureate or higher degree (Table 21).

TABLE 21

Highest Level of Education

	(*n* = 44,586.2)	Percentage
Vocational/practical certificate-nursing	--	--
Diploma-nursing	3,551.3	8.0%
ADN	11,608.8	26.0%
Associate's degree-other field	247.0	0.6%
BSN	16,762.5	37.6%
Baccalaureate degree-other field	3,143.3	7.1%
MSN	6,085.1	13.6%
Master's degree-other field	2,199.7	4.9%
Doctoral degree-nursing practice (DNP)	340.2	0.8%
Doctoral degree-nursing (PhD)	239.1	0.5%
Doctoral degree-nursing other	39.0	0.1%
Doctoral degree-other field	370.3	0.8%

Year Licensed by Education

An examination of year licensed cohort by initial education suggested a decreasing trend for initial education of vocational/practical certificate-nursing and an increasing trend for ADN and BSN degrees (Table 22).

TABLE 22

Year Licensed, by Initial Nursing Education

	Year Licensed			
Initial Nursing Education	**Licensed Prior to 2000 (*n* = 22,452.1)**	**Licensed 2000-2009 (*n* = 8,561.0)**	**Licensed 2010-2012 (*n* = 4,018.3)**	**Licensed 2013-2015 (*n* = 3,266.5)**
Vocational/practical certificate-nursing	1,402.1 6.2%	527.2 6.2%	126.1 3.1%	59.1 1.8%
Diploma-nursing	4,921.2 21.9%	320.1 3.7%	124.9 3.1%	49.2 1.5%
ADN	7,715.1 34.4%	3,574.6 41.8%	1,721.2 42.8%	1,486.4 45.5%
BSN	7,806.4 34.8%	3,753.3 43.8%	1,965.1 48.9%	1,587.1 48.6%
MSN	561.2 2.5%	371.3 4.3%	79.8 2.0%	84.2 2.6%
Doctoral degree-nursing (DNP)	27.3 0.1%	10.9 0.1%	0.0 0.0%	0.0 0.0%
Doctoral degree-nursing (PhD)	6.8 0.0%	3.0 0.0%	0.6 0.0%	0.5 0.0%

Initial Nursing Education	Year Licensed			
	Licensed Prior to 2000 (*n* = 22,452.1)	Licensed 2000-2009 (*n* = 8,561.0)	Licensed 2010-2012 (*n* = 4,018.3)	Licensed 2013-2015 (*n* = 3,266.5)
Doctoral degree-nursing other	7.9 0.0%	0.7 0.0%	0.5 0.0%	0.0 0.0%

Position Title by Level of Education

Job titles were compared with highest level of education (Table 23). Of respondents who indicated "staff nurse" as their primary nursing practice position title, 46.0% had BSN as highest level of education, while only 4.3% indicated MSN as highest level of education. In terms of nurse faculty, these respondents' highest level of education was as follows: MSN (35.8%), DNP (4.8%), PhD-nursing (7.8%), doctoral-nursing other (1.1%), doctoral-other field (4.0%).

TABLE 23

Primary Position Title, by Highest Level of Education

Primary Position Title	*n*	Highest Level of Education							
		Diploma	ADN	BSN	MSN	DNP	PhD-Nursing	Doctoral-Nursing Other	Doctoral-Other Field
Advanced practice nurse	2,991.8	27.3 0.9%	40.6 1.4%	82.0 2.7%	2,430.0 81.2%	190.0 6.4%	29.2 1.0%	4.6 0.2%	34.3 1.2%
Case manager	2,427.2	162.0 6.7%	793.0 32.7%	997.9 41.1%	149.9 6.2%	0.31 0.0%	1.2 0.1%	0 0.0%	10.0 0.4%
Clinical nurse leader	1,469.7	80.4 5.5%	366.6 25.0%	651.8 44.4%	176.2 12.0%	0.8 0.1%	0 0.0%	2.4 0.2%	14.1 1.0%
Consultant	640.3	46.1 7.2%	105.3 16.5%	195.3 30.5%	107.7 16.8%	2.1 0.3%	9.1 1.4%	1.6 0.2%	12.0 1.9%
Nurse executive	852.0	36.7 4.3%	122.1 14.3%	220.3 25.9%	228.8 26.9%	24.8 2.9%	11.0 1.3%	2.2 0.3%	19.3 2.3%
Nurse faculty	1,404.0	22.3 1.6%	193.9 13.8%	350.6 25.0%	502.8 35.8%	67.6 4.8%	109.0 7.8%	14.9 1.1%	55.5 4.0%
Nurse manager	2,975.9	199.1 6.7%	784.9 26.4%	1,169.2 39.3%	466.2 15.7%	11.0 0.4%	1.7 0.1%	0 0.0%	5.6 0.2%
Nurse researcher	234.8	17.4 7.4%	20.6 8.8%	88.1 37.5%	38.5 16.4%	1.7 0.7%	27.4 11.7%	0.2 0.1%	3.1 1.3%
Other-health related	2,093.9	164.3 7.9%	431.9 20.6%	829.7 39.6%	264.8 12.7%	7.3 0.4%	10.4 0.5%	0.6 0.0%	11.5 0.6%
Other-not health related	238.7	17.1 7.2%	51.3 21.5%	76.7 32.2%	29.3598 12.30%	3.3019 1.38%	0.67669 0.28%	0 0.00%	3.90714 1.64%
Staff nurse	21002.6	1397.95 6.66%	6714.65 31.97%	9,649.6 46.0%	902.7 4.3%	15.9 0.1%	3.9 0.0%	0.6 0.0%	61.8 0.3%

Note. Only a portion of the highest level of education categories are shown; hence, percentages will not sum to 100%.

Employment

In the employment section of the survey, participants were asked about primary and secondary positions. Respondents were given the following definitions:

- *Primary position: The position at which you work the most hours during your regular work year.*
- *Secondary position: The position at which you work the second greatest number of hours during your regular work year.*
- *Per diem: An arrangement wherein a nurse is employed directly on an as-needed basis and usually has no benefits.*

The current study's results revealed 81.1% of RN licensees were actively employed in nursing and 62.9% of RN licensees were employed full time (Table 24).

TABLE 24

Employment Status

	(*n* = 46,210.2)	Percentage
Actively employed in nursing	37,488.6	81.1%
Full time	29,088.5	62.9%
Part time	6,088.0	13.2%
Per diem	3,675.2	8.0%
Actively employed in a field other than nursing	2,752.6	6.0%
Full time	1,576.1	3.4%
Part time	850.8	1.8%
Per diem	377.7	0.8%
Employed fully outside of nursing	1,539.4	3.3%
Working in nursing only as a volunteer	564.5	1.2%
Unemployed		
Seeking work as a nurse	1,070.7	2.3%
Not seeking work as a nurse	1,611.6	3.5%
Retired	4,993.7	10.8%

Note. Respondents were asked to mark all that applied. Percentages are calculated off of responding sample.

The Unemployed

Of respondents who indicated they were unemployed (although not retired), half (50.0%) indicated the reason was because of taking care of home and family (Table 25). This was approximately the same as what was found in 2013. Only 15.5% of those who gave a reason for unemployment indicated difficulty in finding a nursing position. This was a drop from 27% in 2013.

TABLE 25

Reasons for Unemployment

	(*n* = 2,272.4)	Percentage
Taking care of home and family	1,137.3	50.0%
Disabled	298.5	13.1%
Inadequate salary	48.2	2.1%
In school	143.1	6.3%
Difficulty in finding a nursing position	352.0	15.5%
Other, please specify	625.9	27.5%

Note. Respondents were asked to mark all that applied.

Employment by Education

Study results of respondents who indicated they were actively employed by highest level of education showed that respondents with an ADN (83.0%), BSN (85.1%), MSN (87.3%), DNP (97.1%), and PhD-nursing (83.7%) had the highest rate of active employment in nursing (Table 26). Respondents with their highest degree in other fields tended to be less likely to have been actively employed in nursing.

TABLE 26

Employment Status by Highest Level of Education

	Highest Level of Education											
Employment Status	**Vocational/ practical certificate-nursing**	**Diploma (*n* = 3,549.1)**	**ADN (*n* = 11,589)**	**Associate's-Other Field (*n* = 246.5)**	**BSN (*n* = 16,744.1)**	**Baccalaureate-Other Field (*n* = 3,140.2)**	**MSN (*n* = 6,076.3)**	**Master's Other Field (*n* = 2,199.5)**	**DNP (*n* = 338.6)**	**PhD-Nursing (*n* = 239.1)**	**Doctoral-Nursing Other (*n* = 36.6)**	**Doctoral-Other Field (*n* = 370.3)**
Employed in nursing (overall)	--	2,145.7 60.5%	9,620.1 83.0%	184.9 75.0%	14,243.8 85.1%	2,401.3 76.5%	5,303.5 87.3%	1,445.6 65.7%	328.6 97.1%	200.2 83.7%	27.2 74.3%	219.7 59.3%
Full time	--	1,390.5 39.2%	7,647.7 12.7%	149.9 7.5%	10,890.5 14.0%	1,805.5 13.5%	4,370.0 12.6%	1,114.4 10.2%	293.2 8.6%	178.3 8.7%	26.1 3.1%	176.9 10.7%
Part time	--	505.1 14.2%	1,466.3 12.7%	18.6 7.5%	2,351.9 14.0%	423.1 13.5%	765.2 12.6%	225.2 10.2%	29.1 8.6%	20.7 8.7%	1.1 3.1%	39. 10.7%
Per diem	--	315.5 8.9%	838.8 7.2%	17.8 7.2%	1,506.1 9.0%	267.7 8.5%	377.3 6.2%	166.3 7.6%	25.5 7.5%	10.6 4.4%	0 0.0%	17.8 4.8%
Employed in other field*	--	101.9 2.9%	237.3 2.0%	7.2 2.9%	439.5 2.6%	144.1 4.6%	156.6 2.6%	310.5 14.1%	4.6 1.4%	10.1 4.2%	0.3 0.7%	75.0 20.3%
Unemployed, seeking work as a nurse	--	69.8 2.0%	318.1 2.7%	8.0 3.2%	376.8 2.3%	95.6 3.0%	85.5 1.4%	35.0 1.6%	4.5 1.3%	1.0 0.4%	3.3 8.9%	10.0 2.7%

Note. Columns do not sum to year licensed *n*'s and percentages do not sum to 100% because the employment status question had additional response options and respondents could select multiple options. Some respondents may have selected "actively employed in nursing"; however, they may not have specified full time or part time. Hence, those numbers will not sum to "actively employed in nursing" totals.

*Is not employed in nursing.

Employment by Position, Setting, Title, and Specialty

An examination of the number of positions respondents were currently employed in as an RN revealed that approximately 12.8% of employed licensees held more than one nursing position; 2.4% held three or more positions. Additionally, 15.0% of those with full-time jobs held two or more nursing positions and 17.2% of those with a primary part-time job held two or more positions.

The current study's results indicated 54.4% of respondents' primary employment setting was a hospital, followed by 11.2% of RNs in ambulatory care, 6.1% in home health, and 4.8% in nursing homes (Table 27). Of the respondents indicating they held a secondary nursing position, the most common (39.2%) secondary employment setting was a hospital.

TABLE 27

Primary Employment Setting

	(*n* = 37,372.1)	**Percentage**
Academic	1,357.0	3.6%
Ambulatory care	4,201.1	11.2%
Assisted living	233.3	0.6%
Community health	786.9	2.1%
Correctional	259.6	0.7%
Home health	2,288.0	6.1%
Hospital	20,311.9	54.4%
Insurance	673.7	1.8%
Nursing home/extended care	1,807.2	4.8%
Occupational health	250.3	0.7%

	(*n* = 37,372.1)	Percentage
Policy/regulatory/licensing	148.7	0.4%
Public health	595.4	1.6%
School health	1,092.8	2.9%
Other	3,366.3	9.0%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing.

The current study's results indicated 58.1% of respondents' primary job title was "staff nurse" and 8.1% of RNs identified as "advanced practice nurse" (Table 28). The largest number of secondary position titles was "staff nurse" (53.6%), followed by 10.8% of RNs reporting a secondary position as "nurse faculty." Ten percent reported a secondary position as "advanced practice nurse."

TABLE 28

Primary Position Title

	(*n* = 37,711.1)	Percentage
Advanced practice nurse	3,069.1	8.1%
Case manager	2,524.8	6.7%
Clinical nurse leader	1,514.1	4.0%
Consultant	672.4	1.8%
Nurse executive	881.4	2.3%
Nurse faculty	1,422.2	3.8%
Nurse manager	3,045.8	8.1%
Nurse researcher	247.2	0.7%
Other-health related	2,171.0	5.8%
Other-not health related	242.5	0.6%
Staff nurse	21,920.7	58.1%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing.

In the current study, 11.4% of RNs reported their primary practice specialty as acute care/critical care, followed by 10.2% who reported a medical-surgical specialty, 5.6% who reported an emergency/trauma specialty, and 6.0% who reported a perioperative care specialty (Table 29). RNs reported specializing in population-specific care — 4.8% reported a geriatric specialty and 4.3% reported a pediatric specialty; 4.8% of RNs reported maternal-child health as a specialty. All other specialty positions were reported to be less than 5%. Rehabilitation and women's health were both identified as a specialty by approximately 2% of RNs. For secondary specialty, 8.2% of RNs reported secondary specialty in acute care/critical care or home health and 22.0% reported "other" as a specialty.

TABLE 29

Primary Employment Specialty

	(*n* = 36,424.1)	Percentage
Acute care/critical care	4,159.1	11.4%
Adult health/family health	756.1	2.1%
Anesthesia	549.9	1.5%
Community	356.7	1.0%
Emergency/trauma	2,026.7	5.6%
Genetics	40.6	0.1%
Geriatric/gerontology	1,754.7	4.8%
Home health	1,604.0	4.4%
Informatics	318.2	0.9%

	(*n* = 36,424.1)	Percentage
Maternal-child health	1,633.9	4.5%
Medical-surgical	3,695.7	10.2%
Neonatal	808.4	2.2%
Nephrology	476.4	1.3%
Neurology/neurosurgical	337.1	0.9%
Occupational health	280.7	0.8%
Oncology	1,044.0	2.9%
Orthopedic	436.1	1.2%
Palliative care/hospice	529.1	1.5%
Pediatrics	1,570.3	4.3%
Perioperative	2,195.7	6.0%
Primary care	1,092.5	3.0%
Psychiatric/mental health/substance abuse	1,418.4	3.9%
Public health	466.0	1.3%
Radiology	191.2	0.5%
Rehabilitation	717.3	2.0%
School health	1,025.1	2.8%
Urologic	87.5	0.2%
Women's health	651.7	1.8%
Other	6,200.8	17.0%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing.

Year Licensed by Employment Status and Setting

Results of an analysis of year licensed cohort by employment status revealed that those most recently licensed had a higher percentage rate for employment in nursing (Table 30). Approximately 93% of those licensed from 2013 to 2015 were employed as compared to RNs licensed prior to 2000 (74.1%). Additionally, RNs licensed from 2013 to 2015 had the highest unemployed and seeking work as a nurse rate (4.6%).

TABLE 30

Year Licensed, by Employment Status

	Year Licensed			
Employment Status	**Licensed Prior to 2000 (*n* = 22,633.4)**	**Licensed 2000-2009 (*n* = 8,599.4)**	**Licensed 2010-2012 (*n* = 4,049.2)**	**Licensed 2013-2015 (*n* = 3,274.6)**
Employed in nursing (overall)	16,763.3 74.1%	7,913.6 92.0%	3,806.4 94.0%	3,048.7 93.1%
Full time	12,359.7 54.6%	6,317.2 73.5%	3,136.8 77.5%	2,748.0 83.9%
Part time	3,235.01 14.3%	1,151.0 13.4%	412.7 10.2%	253.6 7.7%
Per diem	1,815.1 8.0%	724.2 8.4%	396.4 9.8%	147.9 4.5%
Employed in other field*	1,014.7 4.5%	164.8 1.9%	61.8 1.5%	48.2 1.5%

Employment Status	Year Licensed			
	Licensed Prior to 2000 (*n* = 22,633.4)	Licensed 2000-2009 (*n* = 8,599.4)	Licensed 2010-2012 (*n* = 4,049.2)	Licensed 2013-2015 (*n* = 3,274.6)
Unemployed, seeking work as a nurse	443.0 2.0%	192.3 2.2%	111.2 2.7%	151.9 4.6%

Note. Columns do not sum to year licensed *n*'s and percentages do not sum to 100% because the employment status question had additional response options and respondents could select multiple options. Some respondents may have selected "actively employed in nursing"; however, they may not have specified full time or part time. Hence, those numbers will not sum to "actively employed in nursing" totals.

*Is not employed in nursing.

An analysis of year licensed by primary employment setting indicated that newly licensed RNs (those licensed between 2013 and 2015) were the cohort most likely to work in a hospital setting (74.0%), compared to 45.7% of RNs licensed prior to 2000 (Table 31).

TABLE 31

Year Licensed, by Primary Employment Setting

Primary Employment Setting	Year Licensed			
	Licensed Prior to 2000 (*n* = 16,754.2)	Licensed 2000-2009 (*n* = 7,831.6)	Licensed 2010-2012 (*n* = 3,787.3)	Licensed 2013-2015 (*n* = 3,027.1)
Academic	882.7 5.3%	201.3 2.6%	39.5 1.0%	5.8 0.2%
Ambulatory care	2,211.5 13.2%	830.4 10.6%	314.4 8.3%	128.0 4.2%
Assisted living	100.4 0.6%	36.7 0.5%	33.7 0.9%	34.2 1.1%
Community health	381.2 2.3%	163.4 2.1%	67.6 1.8%	38.0 1.3%
Correctional	109.9 0.7%	61.1 0.8%	17.9 0.5%	23.4 0.8%
Home health	1,134.0 6.8%	419.8 5.4%	206.4 5.5%	127.2 4.2%
Hospital	7,660.3 45.7%	4,671.2 59.7%	2,564.1 67.7%	2,239.7 74.0%
Insurance	365.3 2.2%	151.6 1.9%	15.8 0.4%	5.2 0.2%
Nursing home/extended care	804.9 4.8%	347.1 4.4%	202.8 5.4%	181.5 6.0%
Occupational health	162.4 1.0%	39.8 0.5%	14.8 0.4%	2.4 0.1%
Policy/planning/regulatory/licensing	96.6 0.6%	17.6 0.2%	0.9 0.0%	2.7 0.1%
Public health	308.2 1.8%	102.9 1.3%	47.7 1.3%	32.1 1.1%
School health	737.0 4.4%	131.1 1.7%	40.3 1.1%	32.4 1.1%
Other	1,799.8 10.7%	657.5 8.4%	221.3 5.8%	174.7 5.8%

Average Hours Worked

The current study found that the average number of hours worked during a typical week was 37.2 hours. The average number of hours worked during a typical week for RNs with one nursing position was 36.6 hours; for RNs working two or more positions the average number was 42.2 hours. Analysis of average hours worked per week in all nursing positions, by age-group, indicated that respondents age 45 to 49 tended to work the most hours per week (39.1). With the exception of respondents age 65 and older (27.8 hours), there were very small differences in average hours worked per week by age-group.

In terms of average hours worked per week by highest level of education, respondents in the doctoral category, on average, worked the most hours (M = 45.9, SD = 10.0), followed by PhD-nursing (M = 44.4, SD = 11.2). Respondents with a diploma in nursing worked the fewest hours (M = 33.8, SD = 13.0). Those with a diploma as their highest level of education tend to skew older and older age-cohorts are not as likely to work full time, which likely explains why diploma graduates worked the fewest hours.

An examination of average hours worked per week in respondents' primary nursing position revealed that respondents who worked in academic settings (M = 45.0, SD = 8.3) and home health tended to work the most hours (M = 44.0, SD = 9.4). Respondents who worked in school health tended to work the least hours (M = 40.1, SD = 6.7). Respondents with position title of "nurse executive" worked the most hours (M = 48.1, SD = 9.4), while those with position title of "staff nurse" worked the fewest hours (M = 29.8, SD = 7.5).

Telehealth Utilization and Communication

Respondents were asked to indicate the percentage of time they provided nursing services to or communicated with a patient or client located somewhere different from where they were located, via phone or electronically. Those responding "Yes" to providing a service of this type were asked whether the services provided crossed a state or national border (Table 32). Results revealed that 51.2% of respondents never engaged in telehealth, while 31.4% engaged in telehealth between 1% and 25% of their time. Furthermore, of respondents who engaged in telehealth, 60.6% never engaged in telehealth across a state border, while 31.7% engaged in telehealth across a state border between 1% and 25% of their time. Lastly, of respondents who engaged in telehealth, 92.3% never engaged in telehealth across a national border, while 6.6% engaged in telehealth across a national border between 1% and 25% of their time.

TABLE 32

Telehealth Utilization

			Time Percentage				
	n		**Never**	**1%-25%**	**26%-50%**	**51%-75%**	**76%-100%**
Percent utilizing telehealth	37,354.7		19,119.1 51.2%	11,710.7 31.4%	2,560.5 6.9%	1,785.3 4.8%	2179.1 5.8%
Telehealth Utilization Across a State Border							
			Time Percentage				
	n	**Not Applicable***	**Never**	**1%-25%**	**26%-50%**	**51%-75%**	**76%-100%**
Percent utilizing telehealth across state border	18,456.1	17,800.3	11,186.7 60.6%	5,843.2 31.7%	626.8 3.4%	298.5 1.6%	500.9 2.7%
Telehealth Utilization Across a National Border							
			Time Percentage				
	n	**Not Applicable***	**Never**	**1%-25%**	**26%-50%**	**51%-75%**	**76%-100%**
Percent utilizing telehealth across a national border	18,096.2	18,482.1	16,707.2 92.3%	1,194.7 6.6%	96.3 0.5%	33.7 0.2%	64.3 0.4%

*Did not provide nursing services or communicate with remote patients or clients.

Respondents were asked to describe the mode(s) of communication they used to provide nursing services or communicate with a remote patient or client (Table 33). Of respondents who engaged in telehealth, the large majority (97.1%) used the telephone, followed by e-mail (32.3%) and electronic messaging (18.6%).

TABLE 33

Modes of Communication Used for Telehealth

	(*n* = 15,864.1)	Percentage
Not applicable; does not provide nursing services or communicate with remote patients or clients	20,983.0	
Telephone	15,406.7	97.1%
E-mail	5,128.2	32.3%
Electronic messaging (e.g., text message, instant message)	2,954.0	18.6%
Voice over Internet protocol (VoIP) (Skype, FaceTime)	528.7	3.3%
Video call	463.7	2.9%
Virtual ICU (also known as: tele-ICU, remote ICU, eICU)	167.7	1.1%
Other	1,070.9	6.8%

Note. Respondents were asked to mark all that applied.

Annual Earnings

The salary of RNs was not reported in the 2013 National Workforce Survey of Registered Nurses. In the current study, 30.2% of the overall respondents did not answer the primary nursing position earnings question; hence, item nonresponse bias could be impacting the results. Both upper and lower limits for the salary variable were set conservatively and remaining extreme values could be skewing mean values upward; the discussion of the salary figures relies on the median values as being the more accurate measure of central tendency.

The median RN pre-tax annual earnings from their primary nursing position was $65,000; 12.7% of the RNs also reported median pre-tax earnings of $10,000 from a secondary nursing position (Table 34).

TABLE 34

2014 Pre-Tax Annual Earnings from Primary Nursing Position

	n	Median
Overall	32,445.0	$65,000

2014 Pre-Tax Annual Earnings from Secondary Nursing Position

	n	Median
Overall	4,111.0	$10,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Respondents who listed salaries < $1,000/year or > $5 million/year were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Annual Earnings Across States

When broken out by state, the highest median earnings were for RNs practicing in California ($90,000), Hawaii ($82,000), New York ($77,000) and New Jersey ($76,000) (Table 35). The lowest median earnings (not including the territories) were for RNs practicing in South Dakota ($51,000) and Iowa ($51,662).

TABLE 35

Annual Earnings in Primary Nursing Position, by State(s) Where Currently Practicing

	n	Median		*n*	Median
Alabama	687.0	$55,000	New Hampshire	692.0	$64,000
Alaska	707.0	$70,000	New Jersey	544.0	$76,000
Arizona	738.0	$69,000	New Mexico	604.0	$62,000

	n	Median		*n*	Median
Arkansas	695.0	$56,000	New York	675.0	$77,000
California	924.0	$90,000	North Carolina	705.0	$58,890
Colorado	670.0	$63,000	North Dakota	634.0	$54,000
Connecticut	578.0	$75,000	Ohio	722.0	$58,000
Delaware	582.0	$71,000	Oklahoma	661.0	$58,326
Florida	766.0	$60,000	Oregon	653.0	$75,000
Georgia	689.0	$64,000	Pennsylvania	808.0	$62,000
Hawaii	482.0	$82,000	Rhode Island	551.0	$70,000
Idaho	545.0	$60,000	South Carolina	641.0	$57,000
Illinois	747.0	$65,000	South Dakota	686.0	$51,000
Indiana	655.0	$53,000	Tennessee	807.0	$55,000
Iowa	652.0	$51,662	Texas	733.0	$68,700
Kansas	605.0	$54,000	Utah	640.0	$53,000
Kentucky	634.0	$60,000	Vermont	565.0	$62,000
Louisiana	729.0	$60,000	Virginia	591.0	$60,000
Maine	567.0	$60,000	Washington	946.0	$70,000
Maryland	723.0	$70,000	West Virginia	634.0	$55,000
Massachusetts	851.0	$75,633	Wisconsin	600.0	$60,000
Michigan	619.0	$60,000	Wyoming	612.0	$64,000
Minnesota	854.0	$64,870	DC	576.0	$75,000
Mississippi	633.0	$58,000	Virgin Islands	101.0	$62,000
Missouri	781.0	$55,000	Guam	107.0	$52,000
Montana	579.0	$58,000	American Samoa	14.0	$48,000
Nebraska	777.0	$54,000	Northern Mariana Islands	21.0	$35,000
Nevada	643.0	$72,000			

Note. Respondents could select more than one jurisdiction. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Average Salary by Age, Year Licensed, Gender, and Race/Ethnicity

When broken out by age, RN earnings from their primary position show a steady rise up to the 45–49 age-group, where the median salary is $70,000 (Table 36). The median salary peaks in the 55–59 age-group at $72,000 and declines thereafter.

TABLE 36

Annual Earnings in Primary Nursing Position, by Age

	n	Median
Younger than 30	2923.0	$50,000
30-34	3020.0	$58,000
35-39	2799.0	$62,000
40-44	2878.0	$68,000
45-49	2929.0	$70,000
50-54	3841.0	$70,000
55-59	4679.0	$72,000
60-64	4142.0	$70,000
65 and older	2200.0	$54,797

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Concerning year licensed cohort, the median earnings for RNs licensed prior to 2000 was $70,000, while newly licensed RNs had smaller median salaries (Table 37).

TABLE 37

Annual Earnings in Primary Nursing Position, by Year Licensed

	n	*Median*
Licensed prior to 2000	16,057.0	$70,000
Licensed 2000-2009	6,373.0	$65,000
Licensed 2010-2012	3,164.0	$54,000
Licensed 2013-2015	2,026.0	$48,000

The median earnings for male RNs was $72,000; the median earnings for female RNs was $64,000 (Table 38).

TABLE 38

Annual Earnings in Primary Nursing Position, by Gender

	n	Median
Female	28,387.0	$64,000
Male	2,187.0	$72,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

The median annual earnings for White/Caucasian RNs was $62,000; Hispanic RNs, $65,800; Black/African American RNs, $70,000; and Asian RNs, $79,000 (Table 39).

TABLE 39

Annual Earnings in Primary Nursing Position, by Race/Ethnicity

	n	Median
American Indian or Alaska Native	201.0	$63,000
Asian	1,547.0	$79,000
Black/African American	1,529.0	$70,000
Native Hawaiian or Other Pacific Islander	120.0	$80,000
White/Caucasian	27,314.0	$62,000
Hispanic/Latino	729.0	$65,800
Other	244.0	$72,000
Mixed race/ethnicity	617.0	$70,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Annual Earnings by Level of Education and Advanced Practice Specialty

When the findings were broken out by highest level of education, respondents with a BSN had a median salary of $62,000; respondents with an MSN had a median salary of $85,000; respondents with a DNP had a median salary of $92,000; and respondents with a PhD in nursing had a median salary of $96,000 (Table 40).

TABLE 40

Average Salary in Primary Nursing Position, by Highest Level of Education

	n	Median
Vocational/practical certificate-nursing	--	--
Diploma	$1,862.0	$60,000
ADN	8,298.0	$60,000
Associate's-other field	149.0	$65,000
BSN	12,175.0	$62,000
Baccalaureate-other field	2,029.0	$62,000
MSN	4,682.0	$85,000
Master's-other field	1,366.0	$76,000
DNP	292.0	$92,500
PhD-nursing	200.0	$96,000
Doctoral-nursing other	33.0	$104,000
Doctoral-other field	221.0	$80,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Among the advanced practice registered nurse (APRN) specialty areas, the certified registered nurse anesthetist had the highest median earnings ($150,000), while the median earnings for the other three specialty areas ($85,000 to $90,000) were relatively similar (Table 41).

TABLE 41

Annual Earnings in Primary Nursing Position, by APRN Certification/Licensure

	n	Median
Nurse practitioner	2,463.0	$90,000
Clinical nurse specialist	391	$89,000
Certified registered nurse anesthetist	472	$150,000
Certified nurse midwife	140	$85,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Annual Earnings Across Setting, Position Title, and Specialty

Concerning employment setting, RNs working in policy/regulatory agencies ($75,000) and insurance claims/benefits ($70,000) made the highest median salaries, while those working in school health ($45,000) made the lowest (Table 42).

TABLE 42

Annual Earnings in Primary Nursing Position, by Primary Employment Setting

	n	Median
Academic	1,318.0	$66,000
Ambulatory care	3,754.0	$65,000
Assisted living	239.0	$55,000
Community health	776.0	$60,000
Correctional	224.0	$66,000
Home health	1,846.0	$60,000

	n	Median
Hospital	16,599.0	$65,000
Insurance	631.0	$70,000
Nursing home/extended care	1,637.0	$60,000
Occupational health	260.0	$65,000
Policy/regulatory/licensing	134.0	$75,000
Public health	591.0	$55,000
School health	1,008.0	$45,000
Other	2,884.0	$64,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Nurse executives ($100,000) and APRNs ($96,000) made the highest median salaries, while those with title of "staff nurse" ($59,000) or "nurse faculty" ($57,500) made the lowest (Table 43).

TABLE 43

Annual Earnings in Primary Nursing Position, by Primary Position Title

	n	Median
Advanced practice nurse	2,685.0	$96,000
Case manager	2,250.0	$66,000
Clinical nurse leader	1,345.0	$72,000
Consultant	587.0	$70,000
Nurse executive	837.0	$100,000
Nurse faculty	1,363.0	$57,500
Nurse manager	2,716.0	$75,000
Nurse researcher	225.0	$72,000
Staff nurse	18,043.0	$59,000
Other-health related	1,940.0	$66,000
Other-not health related	148.0	$68,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

RNs with the employment specialties of anesthesia ($150,000) and informatics ($82,500) made the highest median salaries, while those with specialties of genetics ($51,070) and school health ($45,000) made the lowest (Table 44).

TABLE 44

Annual Earnings in Primary Nursing Position, by Primary Employment Specialty

	n	Median
Acute care/critical care	3,334.0	$67,000
Adult health/family health	737.0	$75,000
Anesthesia	501.0	$150,000
Community	322.0	$60,000
Emergency/trauma	1,625.0	$66,000
Genetics	45.0	$51,070
Geriatric/gerontology	1,702.0	$60,000
Home health	1,272.0	$60,000
Informatics	302.0	$82,500

	n	Median
Maternal-child health	1,437.0	$62,000
Medical-surgical	2,916.0	$60,000
Neonatal	679.0	$70,000
Nephrology	369.0	$70,000
Neurology/neurosurgical	267.0	$70,000
Occupational health	304.0	$67,000
Oncology	843.0	$65,000
Orthopedic	383.0	$60,300
Palliative care/hospice	446.0	$63,000
Pediatrics	1,277.0	$60,000
Perioperative	1,919.0	$65,000
Primary care	1,039.0	$72,000
Psychiatric/mental health/substance abuse	1,276.0	$65,000
Public health	486.0	$58,000
Radiology	150.0	$65,000
Rehabilitation	551.0	$60,000
School health	942.0	$45,000
Urologic	73.0	$63,000
Women's health	587.0	$64,000
Other	5,436.0	$67,000

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Nurse Faculty

In the current study, 50.3% of respondents who held a principal position as full-time faculty were age 50 and older (Table 45). Of those with a secondary faculty position, 44.7% were age 50 and older, and 9.1% were younger than age 40. One hundred nine (7.8%) of nurse faculty reported having a PhD and an additional 15 (1.1%) reported having a DNP. However, 55.5 (4.0%) reported having a doctoral degree in a field other than nursing; 35.8% held an MSN.

Age Distribution

TABLE 45

Age Distribution of RNs with "Nurse Faculty" as Primary or Secondary Position Title

	Faculty Position	
Age	**Primary Position (*n* = 1,280.7)**	**Secondary Position (*n* = 558.9)**
Younger than 30	120.6 (9.4%)	50.7 (9.1%)
30-34	138.1 (10.8%)	47.8 (8.6%)
35-39	116.2 (9.1%)	65.1 (11.6%)
40-44	128.6 (10.0%)	69.4 (12.4%)
45-49	134.8 (10.5%)	76.3 (13.7%)
50-54	135.3 (10.6%)	67.4 (12.1%)
55-59	189.0 (14.8%)	92.2 (16.5%)
60-64	189.0 (14.8%)	61.4 (11.0%)
65 and older	129.0 (10.1%)	28.7 (5.1%)

Primary and Secondary Positions and Hours Worked

In addition to the 1,422.2 (3.8%) respondents who reported their primary nursing position as faculty in an academic nursing program, there were 609.6 (10.8%) RNs who were employed as faculty in their secondary nursing position. Of the 609.6 RNs employed as faculty in a secondary nursing position, 23.8% reported their principal nursing position as staff nurse, 17.1% reported their primary nursing position as nurse manager/executive or advanced practice nurse, and 10.8% reported their principal nursing position as nurse faculty (Table 46).

TABLE 46

RNs Employed as Faculty in a Secondary Position Title, by Primary Position Title

	Faculty in Secondary Position Title	
Primary Position Title	**(*n* = 596.6)**	**Percentage**
Advanced practice nurse	64.8	7.2%
Case manager	39.9	4.5%
Clinical nurse leader	26.7	3.0%
Consultant	19.9	2.2%
Nurse executive	21.1	2.4%
Nurse faculty	96.9	10.8%
Nurse manager	67.4	7.5%
Nurse researcher	6.1	0.7%
Other-health related	33.5	3.7%
Other-not health related	7.6	0.9%
Staff nurse	212.7	23.7%

In response to the question on hours worked per week by RNs who were faculty in their principal nursing position, 37.4% reported working 37 to 40 hours per week, with an additional 18.2% reporting they work 41 to 50 hours per week, and 10.2% reported working over 50 hours per week (Table 47).

TABLE 47

Hours Worked per Week, by RNs With "Nurse Faculty" as Primary or Secondary Position Title

	Faculty Position	
Hours Worked per Week	**Primary Position (*n* = 1,344.2)**	**Secondary Position (*n* = 578.1)**
1-15	95.0 (7.0%)	27.2 (4.7%)
16-36	361.0 (26.7%)	148.0 (25.6%)
37- 40	504.8 (37.4%)	122.4 (21.2%)
41-50	245.1 (18.2%)	163.0 (28.2%)
51-60	104.5 (7.7%)	109.3 (18.9%)
60+	33.8 (2.5%)	8.2 (1.4%)

Advanced Practice Registered Nurses

In the current study, 4,455.8 (10.4%) of RNs reported also being licensed/certified as an APRN (Table 48). Of those identifying themselves as an APRN, 70.4% identified themselves as nurse practitioners (NPs), 13.0% as clinical nurse specialists (CNSs), 12.9% as certified registered nurse anesthetists (CRNAs), and 3.8% as certified nurse-midwives (CNMs).

TABLE 48

Currently Licensed/Certified as an APRN

	(*n* = 43,045.1)	Overall percentage	Percentage of APRNs
Nurse practitioner	3129.4	7.3%	70.4%
Clinical nurse specialist	576.8	1.3%	13.0%
Certified registered nurse anesthetist	571.9	1.3%	12.9%
Certified nurse midwife	167.7	0.4%	3.8%
Not licensed/certified as any of the above	38599.3	89.6%	

Note. In some states, the position title "clinical nurse specialist" is not legally limited to RNs who have clinical nurse specialist preparation of certification. Respondents who indicated "clinical nurse specialist" without a master's degree or higher were removed from this analysis.

Nurse Practitioners

Age, Education, Employment Setting, and Specialty

The current survey found that 34% of NPs were age 55 or older (Table 49). Nine percent of working NPs were age 65 or older.

TABLE 49

Age Distribution of NPs

	Age								
n	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
2,755.5	166.5 6.0%	317.9 11.5%	361.7 13.1%	390.1 14.2%	307.6 11.2%	288.1 10.5%	343.5 12.5%	321.6 11.7%	258.6 9.4%

In terms of NPs' highest level of education, 91% of NPs had a master's degree or higher (Table 50).

TABLE 50

Highest Level of Education of NPs

	NPs	
Highest Level of Education	**(*n* = 3,049.1)**	**Percentage**
Diploma	30.5	1.0%
ADN	78.0	2.6%
Associate's-other field	0.2	0.0%
BSN	131.3	4.3%
Baccalaureate-other field	22.0	0.7%
MSN	2,405.0	78.9%
Master's-other field	43.7	1.4%
DNP	214.2	7.0%
PhD-nursing	70.0	2.3%
Doctoral-nursing other	13.7	0.5%
Doctoral-other field	39.6	1.3%

NPs were asked which setting best described their primary employment setting (Table 51). Hospitals accounted for 28% of the practice settings; 36.8% of NPs worked in ambulatory care and other community-based settings; and 7.8% worked in academic settings.

TABLE 51

Primary Employment Setting of NPs

	NPs	
Primary Employment Setting	**(*n* = 2,839.5)**	**Percentage**
Academic	222.7	7.8%
Ambulatory care	860.6	30.3%
Assisted living	8.0	0.3%
Community health	185.2	6.5%
Correctional	20.2	0.7%
Home health	50.5	1.8%
Hospital	813.2	28.6%
Insurance	5.6	0.2%
Nursing home/extended care	105.2	3.7%
Occupational health	36.6	1.3%
Policy/regulatory/licensing	1.1	0.0%
Public health	48.5	1.7%
School health	62.0	2.2%
Other	420.1	14.8%

In terms of job titles, 78.2% of NPs reported having a job title of "advanced practice nurse." In terms of clinical specialties, 14.5% of NPs in this survey reported primary care as their principal clinical specialty (Table 52). Other settings where NPs were working included 11.1% in adult/family health, 9.3% in pediatrics/neonatal, and 6.8% in acute care/critical care.

TABLE 52

Primary Employment Specialty of NPs

	NPs	
Primary Employment Specialty	**(*n* = 2,776.2)**	**Percentage**
Acute care/critical care	188.8	6.8%
Adult health/family health	309.3	11.1%
Anesthesia	24.5	0.9%
Community	9.3	0.3%
Emergency/trauma	118.4	4.3%
Genetics	0.9	0.0%
Geriatric/gerontology	137.1	4.9%
Home health	22.0	0.8%
Informatics	3.9	0.1%
Maternal-child health	34.3	1.2%
Medical-surgical	61.0	2.2%
Neonatal	63.7	2.3%
Nephrology	30.0	1.1%
Neurology/neurosurgical	57.4	2.1%
Occupational health	30.8	1.1%
Oncology	81.8	3.0%
Orthopedic	26.7	1.0%
Palliative care/hospice	43.7	1.6%
Pediatrics	195.2	7.0%

	NPs	
Primary Employment Specialty	**(*n* = 2,776.2)**	**Percentage**
Perioperative	18.9	0.7%
Primary care	403.0	14.5%
Psychiatric/mental health/substance abuse	162.0	5.8%
Public health	15.6	0.6%
Radiology	5.5	0.2%
Rehabilitation	6.9	0.3%
School health	44.2	1.6%
Urologic	14.6	0.5%
Women's health	174.6	6.3%
Other	492.0	17.7%

For NPs who identified primary care as their primary specialty area, 51.1% worked in ambulatory care settings, 15.5% worked in public/community health settings, and 1.5% worked in hospitals (Table 53).

TABLE 53

NPs Whose Primary Employment Specialty is Primary Care, by Primary Employment Setting

	NPs in primary care	
Primary Employment Setting	**(*n* = 394.0)**	**Percentage**
Academic	26.0	6.58%
Ambulatory care	201.4	51.1%
Assisted living	0.0	0.0%
Community health	56.2	14.3%
Correctional	5.8	1.5%
Home health	3.1	0.8%
Hospital	5.8	1.5%
Insurance	0.0	0.0%
Nursing home/extended care	3.9	1.0%
Occupational health	3.7	0.9%
Policy/regulatory/licensing	0.0	0.0%
Public health	4.9	1.2%
School health	7.0	1.8%
Other	76.306	19.4%

Certified Nurse Midwives

Age, Education, Employment Setting, and Specialty

The current study found 25.5% of CNMs were younger than age 40 and 56.4% were age 50 or older (Table 54).

TABLE 54

Age Distribution of CNMs

	Age								
n	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
146.5	3.1 2.1%	18.3 12.5%	15.6 10.6%	15.3 10.5%	11.5 7.9%	12.1 8.2%	23.6 16.1%	26.8 18.3%	20.3 13.8%

CNMs were asked to indicate their highest level of education (Table 55). Seventy-five percent of CNMs hold graduate degrees.

TABLE 55

Highest Level of Education of CNMs

	CNMs	
Highest Level of Education	**(*n* = 156.8)**	**Percentage**
Diploma	14.8	9.4%
ADN	10.6	6.8%
Associate's-other field	0.1	0.1%
BSN	13.3	8.5%
Baccalaureate-other field	0.1	0.1%
MSN	107.2	68.4%
Master's-other field	3.4	2.1%
DNP	2.9	1.9%
PhD-nursing	3.4	2.2%
Doctoral-nursing other	0.0	0.0%
Doctoral-other field	1.0	0.6%

Less than half of CNMs worked in hospital settings (43%), and 13.6% were working in ambulatory-care settings. Table 56 lists employment settings for CNMs.

TABLE 56

Primary Employment Setting of CNMs

	CNMs	
Primary Employment Setting	**(*n* = 136.2)**	**Percentage**
Academic	9.5	7.0%
Ambulatory care	18.6	13.6%
Assisted living	4.5	3.3%
Community health	15.3	11.2%
Correctional	0.0	0.0%
Home health	4.0	2.9%
Hospital	58.5	43.0%
Insurance	0.0	0.0%
Nursing home/extended care	0.5	0.3%
Occupational health	0.0	0.0%
Policy/regulatory/licensing	0.0	0.0%
Public health	5.7	4.2%
School health	8.6	6.3%
Other	11.2	8.2%

In terms of job title of CNMs, the majority (71.8%) had an "advanced practice nurse" title, while 17.7% had a "staff nurse" title. The large majority of CNMs with an "advanced practice nurse" title work in clinical specialties related to women's health. Eighty-one percent of CNMs indicated working in maternal-child or women's health specialties (Table 57).

TABLE 57

Primary Employment Specialties of CNMs

	CNMs	
Primary Employment Specialty	**(*n* = 127.0)**	**Percentage**
Maternal-child health	46.6	36.7%
Pediatrics/neonatal	0.3	0.3%
Women's health	56.7	44.6%
Other	7.2	5.7%

Note. Not all employment specialties are displayed; hence, percentages will not sum to 100%.

Certified Registered Nurse Anesthetists

Age and Education

Compared to other APRN groups, CRNAs tend to be younger than their colleagues; specifically, 28.2% were younger than age 40, while 33.2% were age 55 or older; 11.0% of CRNAs age 65 or older continue to work (Table 58).

TABLE 58

Age Distribution of CRNAs

	Age								
n	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
487.2	17.7 3.6%	70.2 14.4%	49.5 10.2%	62.5 12.8%	48.5 10,0%	76.9 15.8%	54.3 11.1%	54.0 11.1%	53.6 11.0%

Seventy-five percent of CRNAs in this sample reported having a master's or doctoral degree. The primary employment setting of CRNAs is predominantly a hospital (81.8%), followed by ambulatory care (12%) and academic settings (2.9%).

TABLE 59

Highest Level of Education of CRNAs

	CRNAs	
Highest Level of Education	**(*n* = 156.8)**	**Percentage**
Diploma	14.8	9.4%
ADN	10.6	6.8%
Associate's-other field	0.1	0.1%
BSN	13.3	8.5%
Baccalaureate-other field	0.1	0.1%
MSN	107.2	68.4%
Master's-other field	3.4	2.1%
DNP	2.9	1.9%
PhD-nursing	3.4	2.2%
Doctoral-nursing other	0.0	0.0%
Doctoral-other field	1.0	0.6%

Age, Education, Employment Setting, and Specialty

In the current study, only 9% of CNSs were younger than age 40, while 26.6% were age 55 or older, and 9.3% were age 65 or older (Table 60).

TABLE 60

Age Distribution of CNSs

	Age								
n	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
505.8	2.9 0.9%	26.5 3.6%	37.3 4.5%	49.2 5.8%	33.1 4.3%	63.3 6.7%	92.6 8.4%	99.6 9.1%	101.2 9.3%

Note. In some states, the position title of "clinical nurse specialist" is not legally limited to RNs who have CNS preparation of certification. Respondents who indicated "clinical nurse specialist" without a master's degree or higher were removed from this analysis.

In the current study, 14.8% of CNSs reported having a doctoral degree (Table 61).

TABLE 61

Highest Level of Education of CNSs

	CNSs	
Highest Level of Education	**(*n* = 576.8)**	**Percentage**
MSN	451.7	78.3%
Master's degree-other field	39.9	6.9%
DNP	18.3	3.2%
PhD-nursing	45.0	7.8%
Doctoral-nursing other	0.7	0.1%
Doctoral-other field	21.2	3.7%

Note. In some states, the position title of "clinical nurse specialist" is not legally limited to RNs who have CNS preparation of certification. Respondents who indicated "clinical nurse specialist" without a master's degree or higher were removed from this analysis.

Almost half of the CNSs (44.4%) worked in hospital settings, while 18.7% reported working in academic settings, and 11.3% worked in ambulatory-care environments (Table 62). Others reported working in nursing homes, home health, public and community health, schools, and policy/regulatory agencies.

TABLE 62

Primary Employment Setting of CNSs

	CNSs	
Primary Employment Setting	**(*n* = 464.9)**	**Percentage**
Academic	86.8	18.7%
Ambulatory care	52.6	11.3%
Assisted living	0.3	0.1%
Community health	12.7	2.7%
Correctional	0.1	0.0%
Home health	17.7	3.8%
Hospital	206.4	44.4%
Insurance	1.3	0.3%
Nursing home/extended care	10.2	2.2%

	CNSs	
Primary Employment Setting	**(*n* = 464.9)**	**Percentage**
Occupational health	7.0	1.5%
Policy/regulatory/licensing	1.5	0.3%
Public health	12.7	2.7%
School health	7.7	1.7%
Other	47.9	10.3%

Note. In some states, the position title of "clinical nurse specialist" is not legally limited to RNs who have CNS preparation of certification. Respondents who indicated "clinical nurse specialist" without a master's degree or higher were removed from this analysis.

There has been a change in the use of the "advanced practice nurse" and "staff nurse" job titles for CNSs. Specifically, 41.4% of CNSs reported having the job title "advanced practice nurse" (Table 63), up from 38% in 2013. Additionally, 11.1% of CNSs indicated having a "staff nurse" job title, down from 20% in 2013.

TABLE 63

Primary Position Titles of CNSs

	CNSs	
Primary position title	**(*n* = 458.9)**	**Percentage**
Advanced practice nurse	190.2	41.4%
Case manger	13.8	3.0%
Clinical nurse leader	23.4	5.1%
Consultant	19.6	4.3%
Nurse executive	18.4	4.0%
Nurse faculty	63.7	13.9%
Nurse manager	27.0	5.9%
Nurse researcher	17.8	3.9%
Other-health related	31.7	6.9%
Other-not health related	2.6	0.6%
Staff nurse	50.8	11.1%

Note. In some states, the position title of "clinical nurse specialist" is not legally limited to RNs who have CNS preparation of certification. Respondents who indicated "clinical nurse specialist" without a master's degree or higher were removed from this analysis.

Foreign-Educated Nurses

The majority (93.3%) of RNs received their entry-level education in the United States. Just over 3% of respondents received their entry-level education in the Philippines, followed by Canada (0.6%) and India (0.4%).

Age, Gender, and Education of Foreign-Educated Nurses

An analysis of foreign-educated nurses by age revealed that fewer were younger than age 40 and more were between the ages of 40 and 50 when compared to U.S.-educated nurses (Table 64).

TABLE 64

Foreign-Educated Status, by Age

		Age								
Foreign-Educated Status	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
U.S.-educated	38017.5	3,790.2 10.0%	3,920.9 10.3%	3,674.9 9.7%	3,724.1 9.8%	3,925.6 10.3%	4,293.4 11.3%	5,186.5 13.6%	4,839.9 12.7%	4,661.9 12.3%

		Age								
Foreign-Educated Status	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Foreign-educated	2518.0	97.5 3.9%	154.4 6.1%	223.5 8.9%	429.4 17.1%	395.2 16.0%	321.3 12.8%	340.7 13.5%	281.9 11.2%	274.0 10.9%

An analysis of foreign-educated status by gender indicated a higher percentage of foreign-educated nurses were male (12.0%) compared to U.S.-educated nurses (7.8%) (Table 65).

TABLE 65

Foreign-Educated Status, by Gender

	Foreign-Educated Status	
Gender	**U.S.-Educated (*n* = 39,862.7)**	**Foreign-Educated (*n* = 2,709.4)**
Male	3,096.8 7.8%	323.7 12.0%
Female	36,765.9 92.2%	2,385.6 88.1%

An analysis of initial nursing education revealed that foreign-educated nurses have higher rates of receiving a BSN for their initial nursing licensure when compared to U.S.-educated nurses (Table 66). For example, for nurses licensed between 2013 and 2015, 72.2% of foreign-educated nurses received a BSN, while 47.2% of U.S.-educated nurses received a BSN.

TABLE 66

Year Licensed and Foreign-Educated Status, by Initial Nursing Education

	U.S.-Educated			
Initial Nursing Education	**Licensed Prior to 2000 (*n* = 20,757.7)**	**Licensed 2000-2009 (*n* = 7,571.8)**	**Licensed 2010-2012 (*n* = 3,768.6)**	**Licensed 2013-2015 (*n* = 3,095.4)**
Vocational/practical certificate-nursing	1,340.5 6.5%	491.1 6.5%	122.1 3.2%	59.0 1.9%
Diploma	4,471.5 21.5%	229.0 3.0%	98.4 2.6%	41.7 1.4%
ADN	7,369.0 35.5%	3,398.6 44.9%	1,638.4 43.5%	1450.2 46.9%
BSN	7,017.7 33.8%	3,120.6 41.2%	1,834.0 48.7%	1462.2 47.2%
MSN	517.9 2.5%	321.3 4.2%	75.2 2.0%	81.8 2.6%
DNP	27.0 0.1%	10.0 0.1%	0.0 0.0%	0.0 0.0%
PhD-nursing	6.8 0.0%	0.8 0.0%	0.0 0.0%	0.5 0.0%
Doctoral-nursing other	7.3 0.0%	0.4 0.0%	0.5 0.0%	0.0 0.0%

	Foreign-Educated			
	Licensed Prior to 2000 (*n* = 1,117.5)	**Licensed 2000-2009 (*n* = 892.1)**	**Licensed 2010-2012 (*n* = 229.6)**	**Licensed 2013-2015 (*n* = 142.4)**
Vocational/practical certificate-nursing	24.0 2.2%	28.1 3.2%	4.1 1.8%	0.2 0.1%
Diploma	304.5 27.3%	80.0 9.0%	23.9 10.4%	7.5 5.2%
ADN	143.0 12.8%	122.3 13.7%	73.0 31.8%	29.5 20.7%
BSN	615.5 55.1%	616.7 69.1%	123.4 53.8%	102.9 72.2%
MSN	30.5 2.7%	41.5 4.7%	4.6 2.0%	2.4 1.7%
DNP	0.0 0.0%	0.9 0.1%	0.0 0.0%	0.0 0.0%
PhD-nursing	0.0 0.0%	2.2 0.3%	0.6 0.3%	0.0 0.0%
Doctoral-nursing other	0.0 0.0%	0.3 0.0%	0.0 0.0%	0.0 0.0%

In terms of highest level of education, 77.8% of foreign-educated nurses had a baccalaureate degree or higher, while 64.8% of U.S.-educated nurses did (Table 67).

TABLE 67

Foreign-Educated Status, by Highest Level of Education

	Foreign-Educated Status	
Highest Level of Education	**U.S.-Educated (*n* = 40,922.2)**	**Foreign-Educated (*n* = 2,831.7)**
Vocational/practical certificate-nursing	--	--
Diploma	3087.0 7.5%	342.6 12.1%
ADN	11,091.2 27.1%	265.1 9.4%
Associate's-other field	223.9 0.5%	20.5 0.7%
BSN	14,991.5 36.6%	1,531.3 54.1%
Baccalaureate-other field	2,927.6 7.2%	149.1 5.3%
MSN	5,715.3 14.0%	278.7 9.8%
Master's-other field	2,008.7 4.9%	153.6 5.4%
DNP	321.5 0.8%	11.9 0.4%
PhD-nursing	222.1 0.5%	14.6 0.5%
Doctoral-nursing other	36.3 0.1%	0.2 0.0%
Doctoral-other field	297.0 0.7%	64.2 2.3%

Employment Setting and Position Title of Foreign-Educated Nurses

Foreign-educated nurses worked more hours (39.5 hours; *SD* 11.7) compared to U.S.-educated nurses (37.0 hours; *SD* 14.2). The number of positions in which the respondents were employed as a nurse were similar to the numbers for U.S.-educated nurses; specifically, 15.1% of U.S.-educated nurses and 16.3% of foreign-educated nurses worked two or more nursing jobs.

An analysis of primary employment setting revealed that foreign-educated nurses were more likely to be employed in a hospital setting as compared to U.S.-educated nurses (Table 68). Additionally, foreign-educated nurses were more likely to be employed in nursing home/extended care settings (10.5%) as compared to U.S.-educated nurses (4.4%).

TABLE 68

Foreign-Educated Status, by Primary Employment Setting

	Foreign-Educated Status	
Primary Employment Setting	**U.S.-Educated (*n* = 34,290.4)**	**Foreign-Educated (*n* = 2,454.1)**
Academic	1,289.4 3.8%	44.6 1.8%
Ambulatory care	3947.2 11.5%	182.9 7.5%
Assisted living	205.5 0.6%	24.3 1.0%
Community health	730.9 2.1%	43.8 1.8%
Correctional	225.5 0.7%	28.5 1.2%
Home health	2,000.0 6.1%	149.3 6.1%
Hospital	18,501.7 54.0%	1,497.6 61.0%
Insurance	631.3 1.8%	26.0 1.1%
Nursing home/extended care	1,501.3 4.4%	258.2 10.5%
Occupational health	239.7 0.7%	4.5 0.2%
Policy/regulatory/licensing	145.1 0.4%	0 0.0%
Public health	551.5 1.6%	36.1 1.5%
School health	1,054.0 3.1%	23.5 1.0%
Other	3,167.6 9.2%	134.7 5.5%

An analysis of primary position titles indicated that a substantially larger percentage of foreign-educated nurses were staff nurses (72.6%) compared to U.S.-educated nurses (57.2%) (Table 69).

TABLE 69

Foreign-Educated Status, by Primary Position Title

	Foreign-Educated Status	
Primary Position Title	**U.S.-Educated (*n* = 34,571.3)**	**Foreign-Educated (*n* = 2,516.2)**
Advanced practice nurse	2,947.2 8.5%	86.6 3.4%
Case manager	2,317.5 6.7%	150.1 6.0%
Clinical nurse leader	1,380.6 4.0%	96.5 3.8%
Consultant	626.0 1.8%	32.6 1.3%
Nurse executive	825.0 2.4An%	44.5 1.8%
Nurse faculty	1,370.0 4.0%	27.5 1.1%
Nurse manager	2,810.7 8.1%	145.6 5.8%
Nurse researcher	234.8 0.7%	8.6 0.3%
Other-health related	2,045.7 5.9%	91.0 3.6%
Other-not health related	234.7 0.7%	7.8 0.3%
Staff nurse	19,779.1 57.2%	1,825.6 72.6%

Discussion and Implications

This study presents a national, randomized survey of 140,154 licensed RNs. Data collected from the 46,476 responders (34.3%) provide the most recent and detailed information on characteristics of today's RN workforce. These data not only illustrate current characteristics and trends of the nursing workforce but also provide valuable information with which to assess progress towards certain goals and priorities outlined by the Institute of Medicine's (2010) *The Future of Nursing* report, including RNs achieving higher levels of education and increased diversity of the nurse workforce.

As of June 2015, an estimated 3,852,881 individuals held an active RN license (up from 3,530,174 in 2013) in the United States and its territories, representing an increase of 322,707 RN licensees from 2013. (At the time of publication [February 2016], there were approximately, 3,764,491 active RN licensees).

The average age of the RNs in this study (49) falls between HRSA's most recently reported (2013) average age (44.6) and the average age reported in the 2013 National Nursing Workforce Survey (50). The current study did not indicate an impending shortage of nurses due to large age cohorts retiring. In fact, there was not a disproportionate number of older RNs; further, RNs in the older age cohorts were less likely to be employed in nursing full time. However, among APRNs, the age of CNMs and CNSs has increased more than that of NPs and CRNAs. However, data did suggest an aging nurse faculty. Approximately 50% of full-time faculty were age 50 and older; only 9.4% of nurse faculty were younger than age 40. Of those with a secondary faculty position, 44.7% were age 50 and older, and 9.1% were younger than age 40. These data differ slightly from those of HRSA (2010), which found that almost 60% of nurse faculty were older than age 50, and only 15% were younger than age 40.

Evidence on the progress towards the IOM recommendation of increasing the proportion of nurses with a baccalaureate degree to 80% by the year 2020 has been steadily accumulating over the past 5 years. This study found that 65% of all RNs had obtained a baccalaureate or higher degree, up from 2013, when 61% had obtained a baccalaureate or higher degree. Newly licensed RNs, those licensed from 2013 to 2015, were more likely to have obtained a BSN as their initial education (48.6%) versus RNs licensed prior to 2000 (34.8%). This trend toward a higher percentage of RNs with a BSN as their initial education was further illustrated by an increase in the percentage of respondents with a BSN degree as their initial nursing education (39.0%), as compared to the

2013 data (36%). This consistent growth aligns with HRSA (2013) results, which found a 135% growth (from 2001 to 2011) in BSN-prepared first-time NCLEX-RN® test takers. Among RNs with initial education at the diploma level, 46.3% obtained additional degrees after licensure, the most common being a BSN (14.3%).

Buerhaus, Auerbach, and Staiger (2014) investigated the growth of the number of graduates from ADN, BSN, and graduate programs in nursing. Results revealed for the first time ever, in 2011, the number of nurses who earned BSN degrees was greater than the number of nurses with ADN degrees. The number of graduates from both types of programs increased from 2002 to 2012; however, the percentage of degrees awarded at the BSN level increased from 45% in 2002 to 53% in 2012. Influencing this change was the rapid growth of accelerated RN-to-BSN nursing education programs and growth of nursing education programs in general.

The current study found that approximately 6.7% of the RN workforce obtained their entry-level nursing education outside of the United States. HRSA (2010) showed that 5% of the RNs licensed prior to 2004 were foreign-educated nurses, and 8% since then. In 2013, 6% of the respondents were foreign-educated, indicating a slight upward trend. For nurses licensed between 2013 and 2015, foreign-educated graduates were more likely to have obtained a BSN to qualify them for their first U.S. license (72.2%) as compared to U.S.-educated graduates (47.2%). More broadly, in terms of highest level of education, 77.8% of foreign-educated nurses had a baccalaureate degree or above, while 64.8% of U.S.-educated nurses did.

In 2015, the IOM released a report in brief, *Assessing Progress on the Institute of Medicine Report The Future of Nursing* (IOM, 2015). A specific recommendation was to promote diversity in the profession to better represent the patient population it serves, including gender, race, and ethnic diversity. The current study indicated that male RNs (8.0%) were better represented in the nursing workforce compared to 2013 results (7%). While this percentage is lower than the 9.2% reported by HRSA (2015), our data indicated a substantially higher proportion of males in the more recently licensed cohorts (12.7%), as opposed to those licensed prior to 2000 (4.7%), suggesting higher percentages of men in the nursing workforce in the future. In terms of racial and ethnic minority diversity, minority groups accounted for approximately 19.5% of the RN respondents in the 2015 and 2013 surveys; HRSA's brief on gender and racial/ethnic diversity of U.S. health occupations for 2010–2012 (HRSA, 2015) found 21.4%. These estimates are below the almost 40% of ethnic minorities in the U.S. population (U.S. Census Bureau, 2015). The current study's data indicate that, when compared with White/Caucasian nurses, ethnic minorities are better represented in younger age-groups and more recently licensed RNs than older RNs and RNs licensed prior to 2000. Again suggesting that as older RNs retire, the RN workforce may become more racially/ethnically diverse.

The *Future of Nursing* report also recommended doubling the number of nurses with a doctorate degree by 2020 (IOM, 2010). In this study, 2.2% reported their highest education degree was a doctorate or a DNP. Less than 4% of respondents were full-time nurse faculty. Among nurse faculty, slightly less than 13% held a doctorate in a nursing-related or other field; approximately 5% of this group had a DNP, 8% had a PhD-nursing, while 36% had an MSN as their highest education. Of all study respondents with a secondary position in nursing, almost 11% indicated they were nurse faculty. The national shortage of doctorally prepared nurse faculty contributed to many qualified nursing school applicants in 2014 being turned down (American Association of Colleges of Nursing, 2015). While more full-time and primary nurse faculty are needed, RNs who work part time as nurse faculty in a secondary position are one avenue of increasing nurse faculty numbers.

The percentage of APRNs in the nursing workforce increased from 7% to 9% in 2013 and to between 8.5% and 10% in the current study. Seventy percent of APRNs were NPs; 13% were CNSs; approximately 4% were CNMs; and 13% were CRNAs. In terms of age, of those indicating "advanced practice nurse" as primary position title, 56.9% were younger than age 50 and 43.1% were age 50 and older. Data suggested an aging trend in CNMs more so than any other APRN group, a finding supported when data are compared with HRSA's 2010 and 2013 reports. Over 90% of APRNs have a master's degree or higher, a finding unchanged since HRSA's 2010 findings. Since 2011, the number of CNMs actively working toward a master's degree or doctorate has substantially increased compared to HRSA's 2010 findings. Seventy-five percent of CNMs now hold graduate degrees compared to 56% in 2008. Almost 80% of all APRNs have the job title "advanced practice nurse."

Approximately 70% of CNMs had an "advanced practice nurse" title, while 17.7% had a "staff nurse" title. This is a shift from HRSA's 2010 results, where 42% of CNMs had an "advanced practice nurse" title and 38% had a "staff nurse" title.

Compared to other APRN groups, CRNAs tend to be younger than their colleagues; however, the percentage of CRNAs younger than age 40 has decreased from 2008 (HRSA, 2010), and the percentage older than age 55 is higher—11.0% of CRNAs age 65 or older continue to work. Prior to 2008, CRNAs were not required to have graduate-level education; the number of CRNAs with graduate-level preparation has increased to 70% as compared to 65% reported by HRSA in 2010.

Approximately 80% of the responding licensed RNs reported being actively employed in nursing and 63% are employed full time. In 2010, HRSA estimated that 85% of licensed RNs were employed in nursing. In this study, RNs worked approximately 40 hours per week. Over 50% of RNs' primary employment setting was a hospital, down from 62% in 2008 (HRSA, 2010), and

newly licensed RNs were most likely to be found in a hospital setting. Nurses' work setting is changing due in part to the growing use and acceptance of technology (American Well, 2015; HIMSS Analytics, 2015).

Telehealth is a growing trend in health care delivery and has the potential to affect the nursing workforce as well as nurse licensure issues. For these reasons, the current survey added additional items related to telehealth practice by nurses. When looking at telehealth usage results, it is important to consider how the question was worded and how that may have influenced how RNs responded. Respondents were asked to indicate the percentage of time they provided nursing services or communicated with a patient or client located somewhere different from where they were located, via phone or electronically. Results revealed that nearly half of RNs have provided nurse services using telehealth technologies. Of those, 39.4% provided these services across a state border and 7.7% across a national border.

These data raise important questions for employers and regulators. The NCSBN National Licensure Compact (NLC) is working with states to advance a multistate licensure model that replaces the one-license, one-state model and would allow nurses to communicate and provide services remotely and over long distances. NCSBN is working with states to adopt the NLC, which will provide a multistate license to eligible nurses. This would be issued by their state of residence and allow them to practice across state lines in other Compact states without the time and expense of obtaining additional licenses.

The median RN pre-tax annual earnings from a primary nursing position was $65,000. In 2010, HRSA reported a mean salary of $66,973. It should be noted that a direct comparison of median salary with mean salary has many limitations, as the mean is more sensitive to outliers. Further data, on salary in this study revealed that the difference in median earnings for male (at $72,000) and female RNs (at $64,000) was consistent with other studies (Buerhaus, Auerbach & Staiger, 2014; Muench, Sindelar, Busch, & Buerhaus, 2015). In the current study, median salaries differed greatly based on geographic region; for instance, RNs in California reported the highest median salary ($90,000), while RNs practicing in South Dakota reported the lowest ($51,000). Additionally, a breakdown of salary by race/ethnicity showed that White/Caucasian RNs exhibited the lowest median salary, although this may be a function of the geographic distribution of race/ethnicity across the United States; racial/ethnic minority RNs tend to be more predominately located in states with higher salaries.

Limitations

The current study had a few limitations. First, the response rate was 34.3% for RNs. In 2013, the overall RN response rate was 39%. The current study used a different mailing method and included a $1 incentive, which could be reasons for the lower response rate. Another reason could be the addition of the salary question, which has the potential to suppress response rates. Response rates are one measure of survey quality; however, they may not be a good measure of response bias. A formal nonresponse bias analysis was conducted following the close of the survey. An analysis of basic demographic data (i.e., gender, age, race/ethnicity, number of years since graduation, number of years since first licensed) for all RN licensees sampled from the Nursys database was used to compare the survey respondents and nonrespondents to determine the representativeness of the survey participants. Results revealed that the following groups of nurses may have been slightly overrepresented: White/Caucasian, female, age 60 or older. Because of missing data on race/ethnicity, only gender and age were used to make nonresponse weighting adjustments. Additionally, since the sampling was stratified by state, to prevent smaller states from being overrepresented in the overall analysis, a weighting variable was constructed to adjust for differing nursing population sizes across states.

Second, in certain categories such as annual earnings data were missing or incomplete, causing inconsistent statistics. The large sample size of the study partially compensated for this problem; for the variable of salary, we determined that median salary was the most accurate measure of central tendency. Of the overall respondents, 30.2% did not answer the primary nursing position earnings question; hence, item nonresponse bias could be impacting the results. Both upper and lower limits have been set on the provided salary figures and extreme values could be skewing mean values upward; the discussion of the salary figures relies on the median values as being the more accurate measure of central tendency.

The data on telehealth cannot be directly compared to other studies on this topic, as the wording necessary for our purposes was not congruent with other studies. Future data collection efforts should involve consistent wording of questions so trends can be compared to earlier findings.

The data presented on male nurses, foreign-educated nurses, and APRNs represent smaller sample sizes. In general, caution should be taken in interpreting any statistics from a small group or cell size.

Finally, to illustrate trends in workforce supply, the current study's results, as appropriate, were compared to the 2013 National Nursing Workforce Study (Budden et al., 2013), in which data were from 2013; to HRSA 2010 results, which were RN workforce data from 2008; and to HRSA 2013 findings, which were from 2008–2010. While the current study used a sample of all RN licensees, which included individuals who were not actively employed in nursing, the other studies may not have. When comparing the current study's results to those of HRSA 2013, which contained data from the U.S. Census Bureau's American Community

Survey, it should be noted the data were from individuals who reported their current occupation as nursing and who currently had or were seeking a job. The HRSA 2015 data cited were for the U.S. working-age population age 16 or older who were currently employed or who were recently employed and were seeking employment (e.g., individuals who were recently laid off). Thus, the comparisons of statistics from various studies presented should be interpreted with the above considerations in mind.

Conclusion

This national randomized survey provides a cross-sectional view of the current RN nursing workforce. The data generated contribute to a better understanding of the supply of nurses today and identify important trends in the national workforce. The workforce of today will change as older nurses retire and sufficient numbers of nurses step in to fill their shoes; the workforce of tomorrow is slightly younger, more diverse, and has a higher initial nursing education. Advances in technology will continue to raise important questions for employers and regulators. This study also contributes information with which to assess progress towards the goals outlined in the *Future of Nursing* report (IOM, 2010), including achieving higher levels of education, promoting diversity, and improving data collection concerning the national health workforce.

Licensed Practical Nurse/Vocational Nurse Results

Of the 120,783 LPN/VNs in the sample, 32,263 responded, for a response rate of 28.0%; 29,500 (91.4%) responded via paper surveys and 2,763 (8.6%) responded online. Mailed surveys marked undeliverable (5,493) were returned. Individuals with LPN/VN licenses that indicated they held an RN and/or APRN credential were removed from analyses.

Age

The average age of LPN/VNs was 47.8 (*M* 48; *SD* 13.1). The reported age of respondents was similar across all age categories; gender, by age-group, was similar for male and female LPN/VNs (Table 70).

TABLE 70

Age Distribution and Gender by Age

		Age								
	n	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
	27172.4	2,652.5 9.8%	2,579.5 9.5%	2,689.3 9.9%	3,331.8 12.3%	3,375.1 12.4%	3,076.4 11.3%	3,516.3 12.9%	3,264.9 12.0%	2,686.6 9.9%
Gender, by Age										
						Age				
Gender	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Female	1,977.8	233.8 11.8%	212.7 10.8%	163.5 8.3%	272.0 13.8%	320.0 16.2%	245.8 12.4%	232.8 11.8%	179.9 9.1%	117.2 5.9%
Male	23,772.9	2,283.3 9.6%	2,257.0 9.5%	2,429.5 10.2%	2,942.8 12.4%	2,893.1 12.2%	2,663.8 11.2%	3,100.4 13.0%	2,832.2 11.9%	2,370.7 10.0%

Race/Ethnicity by Age

In terms of race/ethnicity by age-group, larger percentages of minorities are younger as compared to those nearing retirement (Table 71). For instance, 33.1% of Asians reported being younger than age 35, while 9.7% reported being age 60 or older. While 17.8% of White/Caucasians reported being younger than age 35, 25% reported being age 60 or older.

TABLE 71

Race/Ethnicity, by Age

		Age								
Race/Ethnicity	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
American Indian or Alaska Native	237.4	31.0 13.1%	11.5 4.8%	15.9 6.7%	27.8 11.7%	27.0 11.4%	29.1 12.3%	38.2 16.1%	32.9 13.9%	24.0 10.1%
Asian	1,421.3	243.3 17.1%	228.0 16.0%	134.5 9.5%	209.4 14.7%	214.6 15.1%	133.3 9.4%	121.2 8.5%	103.4 7.3%	33.7 2.4%
Black/African American	4,106.0	244.9 6.0%	360.4 8.8%	509.2 12.4%	697.5 17.0%	622.2 15.2%	481.6 11.7%	424.8 10.4%	354.6 8.6%	410.8 10.0%
Native Hawaiian or Other Pacific Islander	127.5	10.1 8.0%	18.3 14.4%	3.4 2.7%	24.6 19.3%	39.1 30.7%	8.5 6.7%	14.8 11.6%	6.2 4.8%	2.5 1.9%
White/ Caucasian	18,439.7	1,701.8 9.2%	1,582.0 8.6%	1,651.1 9.0%	1,912.7 10.4%	2,127.5 11.5%	2,167.6 11.8%	2,692.5 14.6%	2,561.1 13.9%	2,043.3 11.1%
Hispanic/ Latino	1,708.2	288.9 16.9%	232.8 13.6%	229.9 13.5%	320.7 18.8%	191.9 11.2%	152.1 8.9%	116.7 6.8%	103.3 6.1%	71.9 4.2%
Other	336.1	32.1 9.5%	35.7 10.6%	31.7 9.4%	52.3 15.6%	50.7 15.1%	36.1 10.7%	31.4 9.4%	28.7 8.5%	37.6 11.2%
Mixed	629.3	92.2 14.7%	104.5 16.6%	97.4 15.5%	68.7 10.9%	64.3 10.2%	52.7 8.4%	55.2 8.8%	50.4 8.0%	43.9 7.0%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Initial Nursing Education by Age

An examination of initial nursing education by age-group revealed that those age 60 and older showed a higher percentage of receiving a vocational/practical certificate-nursing (23.2%) versus those younger than age 35 (18.8%) (Table 72).

TABLE 72

Initial Nursing Education, by Age

		Age								
Initial Nursing Education	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
Vocational/ practical certificate-nursing	22,266.8	2,164.5 9.7%	2,031.3 9.1%	2,119.3 9.5%	2,646.8 11.9%	2,711.1 12.2%	2,469.5 11.1%	2,965.7 13.3%	2,816.0 12.7%	2,342.5 10.5%
Diploma	3,283.19	318.0 9.7%	384.7 11.7%	382.6 11.7%	447.0 13.6%	458.4 14.0%	430.3 13.1%	345.9 10.5%	287.2 8.8%	229.2 7.0%
ADN	1,022.35	116.2 11.4%	131.4 12.9%	120.2 11.8%	148.6 14.5%	124.6 12.2%	120.6 11.8%	121.1 11.8%	80.9 7.9%	58.8 5.8%
BSN	111.35	23.6 21.2%	2.8 2.6%	3.0 2.7%	21.9 19.7%	25.1 22.5%	6.6 5.9%	11.4 10.2%	11.7 10.5%	5.3 4.8%

Employment Status by Age

An analysis of age-group by employment status revealed that a much lower percentage of LPN/VNs were employed in nursing between the ages of 60 and 64 (68.0%) and 65 and older (42.0%) as compared to LPN/VNs younger than age 30 (85.0%) (Table 73). Additionally, LPN/VNs younger than age 30 had the highest unemployed rate (9.2%).

TABLE 73

Age, by Employment Status

	Age								
Employment Status	**Younger Than 30 (*n* = 2,651.6)**	**30-34 (*n* = 2,579.0)**	**35-39 (*n* = 2,687.4)**	**40-44 (*n* = 3,322.0)**	**45-49 (*n* = 3,368.9)**	**50-54 (*n* = 3,066.4)**	**55-59 (*n* = 3,512.5)**	**60-64 (*n* = 3,261.3)**	**65 and Older (*n* = 2,679.8)**
Employed in nursing (overall)	2,254.1 85.0%	2,246.8 87.1%	2,303.0 85.7%	2,916.0 87.8%	2,884.8 85.6%	2,529.4 82.5%	2,728.4 77.7%	2,218.8 68.0%	1,125.5 42.0%
Full time	1,756.4 66.2%	1,822.6 70.7%	1,864.8 69.4%	2,483.6 74.8%	2,441.6 72.5%	2,171.3 70.8%	2,178.4 62.0%	1,699.6 52.1%	540.1 20.2%
Part time	342.1 12.9%	316.4 12.3%	342.8 12.8%	322.3 9.7%	348.2 10.3%	304.5 9.9%	426.3 12.1%	389.1 11.9%	452.3 16.9%
Per diem	242.2 9.1%	246.9 9.6%	203.2 7.6%	218.7 6.6%	212.1 6.3%	150.8 4.9%	262.4 7.5%	231.9 7.1%	198.6 7.4%
Employed in other field*	83.5 3.1%	73.1 2.8%	133.1 5.0%	141.4 4.3%	211.0 6.3%	208.2 6.8%	218.3 6.2%	219.5 6.7%	96.1 3.6%
Unemployed, seeking work as a nurse	243.6 9.2%	148.0 5.7%	131.2 4.9%	160.9 4.8%	177.3 5.3%	151.1 4.9%	168.5 4.8%	126.4 3.9%	86.8 3.2%

Note. Columns do not sum to age *n*'s and percentages do not sum to 100% because the employment status question had additional response options and respondents could select multiple options. Some respondents may have selected "actively employed in nursing"; however, they may not have specified full time or part time. Hence, those numbers will not sum to "actively employed in nursing" totals.

*Is not employed in nursing.

Gender

The current study indicated 7.5% of the LPN/VN workforce was male and 92.5% were female.

Year Licensed by Gender

An examination of gender of LPN/VNs by year licensed cohort revealed a trend toward an increase in the proportion of males in the workforce (Table 74). Specifically, for respondents licensed prior to 2000, 4.7% were male; of those licensed from 2010 to 2012, 10.3% were male; and of those licensed from 2013 to 2015, 12.7% were male.

TABLE 74

Year Licensed, by Gender

	Year Licensed			
Gender	**Licensed Prior to 2000 (*n* = 11,119.2)**	**Licensed 2000-2009 (*n* = 6,339.7)**	**Licensed 2010-2012 (*n* = 3,306.2)**	**Licensed 2013-2015 (*n* = 3,104.1)**
Female	10,597.5 95.3%	5,806.8 91.6%	2,965.1 89.7%	2,709.3 87.3%
Male	521.2 4.7%	532.9 8.4%	341.1 10.3%	394.8 12.7%

Education, Employment Setting, and Position Title by Gender

Results of highest level of education of LPN/VNs employed in nursing by gender indicated men were most prevalent in the master's-other field category (35.6%) (Table 75).

TABLE 75

Highest Level of Education of LPN/VNs Employed in Nursing, by Gender

		Gender	
Highest Level of Education	***n***	**Men**	**Women**
Vocational/practical certificate-nursing	13,927.7	874.4 6.3%	13,053.3 93.7%
Diploma	2,957.0	167.2 5.7%	2,789.8 94.4%
ADN	1,460.3	114.7 7.9%	1,345.6 92.1%
Associate's-other field	1,645.7	177.4 10.8%	1,468.4 89.2%
BSN	225.7	43.4 19.2%	182.3 80.8%
Baccalaureate-other field	1,254.4	245.5 19.6%	1,008.9 80.4%
MSN	13.6	0.0 0.0%	13.6 100.0%
Master's-other field	219.0	77.9 35.6%	141.2 64.4%
DNP	0.0	0.0 0.0%	0.0 0.0%
PhD-nursing	0.0	0.0 0.0%	0.0 0.0%
Doctoral-nursing other	0.0	0.0 0.0%	0.0 0.0%
Doctoral-other field	26.0	4.6 17.8%	21.4 82.3%

Results of primary employment settings by gender indicated men were more prevalent in correctional facilities (17.4%), academic settings (11.0%), and hospitals (10.9%) (Table 76).

TABLE 76

Primary Employment Setting, by Gender

		Gender	
Primary Employment Setting	***n***	**Men**	**Women**
Academic	132.1	14.6 11.0%	117.5 89.0%
Ambulatory care	1,940.6	101.7 5.2%	1,838.9 94.8%
Assisted living	1,277.4	108.8 8.5%	1,168.5 91.5%
Community health	866.0	56.4 6.5%	809.5 93.5%
Correctional	617.3	107.7 17.4%	509.7 82.6%
Home health	3,262.6	254.2 7.8%	3,008.4 92.2%
Hospital	2,345.1	256.2 10.9%	2,089.0 89.1%

		Gender	
Primary Employment Setting	***n***	**Men**	**Women**
Insurance	244.0	11.9 4.9%	232.1 95.1%
Nursing home/extended care	6,511.8	559.1 8.6%	5,952.2 91.4%
Occupational health	162.4	14.8 9.1%	147.6 90.9%
Policy/regulatory/licensing	30.4	0.0 0.0%	30.4 100.0%
Public health	387.5	9.8 2.5%	377.6 97.5%
School health	652.5	15.8 2.4%	636.6 97.6%
Other	3,221.2	194.5 6.0%	3,026.7 94.0%

Analysis of primary position title by gender indicated that men were more prevalent in the nurse executive (20.7%) and consultant (11.6%) positions (Table 77).

TABLE 77

Primary Position Title, by Gender

		Gender	
Position Title	***n***	**Men**	**Women**
Advanced practice nurse	369.5	14.7 4.0%	354.8 96.0%
Case manager	542.6	57.1 10.5%	485.6 89.5%
Clinical nurse leader	811.2	53.0 6.5%	758.1 93.5%
Consultant	131.6	15.3 11.6%	116.3 88.4%
Nurse executive	129.1	26.8 20.7%	102.3 79.3%
Nurse faculty	899.1	56.1 6.2%	843.0 93.8%
Nurse manager	1,271.9	115.1 9.1%	1,156.7 91.0%
Nurse researcher	60.3	0.0 0.0%	60.3 100.0%
Other-health related	2,405.1	168.6 7.0%	2,236.5 93.0%
Other-not health related	210.2	19.6 9.3%	190.6 90.7%
Staff nurse	15,323.1	1,260.5 8.2%	14,062.1 91.8%

Race/Ethnicity

The current study found that 31.9% of responding LPN/VNs were minorities, while 68.1% of the respondents were White/Caucasian (Table 78). The largest reporting minority group was Black/African American (15.3%).

TABLE 78

Race/Ethnicity

	(*n* = 30,620.8)	Percentage
American Indian or Alaska Native	267.6	0.9%
Asian	1,583.2	5.2%
Black/African American	4,689.5	15.3%
Native Hawaiian or Other Pacific Islander	144.4	0.5%
White/Caucasian	20,839.7	68.1%
Hispanic/Latino	1,964.6	6.4%
Other	429.2	1.4%
Mixed	702.6	2.3%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Employment by Age and Race/Ethnicity

An examination of age of LPN/VNs employed in nursing by race/ethnicity found that Hispanic/Latinos were, on average, the youngest, while White/Caucasians were the oldest (Table 79).

TABLE 79

Age of LPN/VNs Employed in Nursing, by Race/Ethnicity

	n	*M*	*SD*	Min	Max	Median
American Indian or Alaska Native	313.0	48.8	11.5	20.0	79.0	50.0
Asian	879.0	42.3	15.2	21.0	82.0	42.0
Black/African American	3,336.0	47.6	13.4	19.0	100.0	46.0
Native Hawaiian or Other Pacific Islander	115.0	44.0	11.2	24.0	74.0	45.0
White/Caucasian	20,515.0	49.0	12.5	19.0	105.0	50.0
Hispanic/Latino	869.0	42.1	16.9	20.0	87.0	41.0
Other	271.0	47.2	14.7	20.0	87.0	45.0
Mixed	676.0	43.5	12.6	19.0	93.0	41.0

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Year Licensed by Race/Ethnicity

Compared to those licensed prior to 2000, newly licensed LPN/VNs were more likely to have a more diverse racial/ethnic composition (Table 80). In particular, of LPN/VNs licensed prior to 2000, 78.8% were White/Caucasian, while 55.6% of LPN/VNs licensed from 2013 to 2015 were White/Caucasian.

TABLE 80

Year Licensed, by Race/Ethnicity

	Year Licensed			
Race/Ethnicity	**Licensed Prior to 2000 (*n* = 11,809.7)**	**Licensed 2000-2009 (*n* = 6,562.6)**	**Licensed 2010-2012 (*n* = 3,489.4)**	**Licensed 2013-2015 (*n* = 3,243.1)**
American Indian or Alaska Native	101.3 0.9%	44.1 0.7%	41.0 1.2%	23.7 0.7%

Race/Ethnicity	Year Licensed			
	Licensed Prior to 2000 (*n* = 11,809.7)	Licensed 2000-2009 (*n* = 6,562.6)	Licensed 2010-2012 (*n* = 3,489.4)	Licensed 2013-2015 (*n* = 3,243.1)
Asian	239.0 2.0%	461.5 7.0%	293.5 8.4%	281.8 8.7%
Black/African American	1,453.6 12.3%	1,119.8 17.1%	611.1 17.5%	512.5 15.8%
Native Hawaiian or Other Pacific Islander	25.4 0.2%	44.9 0.7%	33.4 1.0%	27.7 0.9%
White/Caucasian	9,308.8 78.8%	4,144.6 63.2%	2,015.5 57.8%	1,802.5 55.6%
Hispanic/Latino	365.7 3.1%	490.8 7.5%	317.2 9.1%	425.7 13.1%
Other	131.1 1.1%	107.0 1.6%	55.5 1.6%	44.5 1.4%
Mixed	184.9 1.6%	150.0 2.3%	122.2 3.5%	124.7 3.8%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options they were coded as Mixed Race/Ethnicity.

Education and Position Title by Race/Ethnicity

Data suggest that LPN/VNs with their highest level of education as BSN had lower percentages of White/Caucasian as compared to those with certificate, diploma, and ADN education (Table 81).

TABLE 81

Highest Level of Education of LPN/VNs Employed in Nursing, by Race/Ethnicity

Highest Level of Education	*n*	Race/Ethnicity							
		American Indian or Alaska Native	Asian	Black/ African American	Native Hawaiian or Other Pacific Islander	White/ Caucasian	Hispanic/ Latino	Other	Mixed
Vocational/ practical certificate-nursing	14,693.7	118.8 0.8%	532.5 3.6%	1,977.2 13.5%	81.4 0.6%	10,459.4 71.2%	1,066.8 7.3%	151.5 1.0%	306.1 2.1%
Diploma	3,129.9	17.9 0.6%	146.4 4.7%	703.0 22.5%	4.9 0.2%	2027.2 64.8%	119.3 3.8%	50.3 1.6%	60.9 1.9%
ADN	1,542.1	22.9 1.5%	64.7 4.2%	241.3 15.6%	11.8 0.8%	987.5 64.0%	128.3 8.3%	48.9 3.2%	36.7 2.4%
Associate's-other field	1,714.6	22.9 1.3%	53.1 3.1%	406.2 23.7%	7.9 0.5%	989.0 57.7%	148.1 8.6%	18.4 1.1%	69.0 4.0%
BSN	240.1	0.0 0.0%	158.5 66.0%	13.6 5.7%	0.9 0.4%	28.6 11.9%	14.9 6.2%	22.6 9.4%	1.0 0.4%
Baccalaureate-other field	1,334.9	9.5 0.7%	234.5 17.6%	293.6 22.0%	4.7 0.4%	669.0 50.1%	66.5 5.0%	14.3 1.1%	42.8 3.2%
MSN	13.6	0.0 0.0%	6.8 50.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	6.8 50.0%	0.0 0.0%
Master's-other field	233.4	4.8 2.1%	45.7 19.6%	84.9 36.4%	0.6 0.3%	85.1 36.5%	9.1 3.9%	1.0 0.4%	2.2 0.9%
DNP	0.0	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%

Highest Level of Education	n	Race/Ethnicity							
		American Indian or Alaska Native	Asian	Black/ African American	Native Hawaiian or Other Pacific Islander	White/ Caucasian	Hispanic/ Latino	Other	Mixed
PhD-nursing	0.0	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
Doctoral-nursing other	0.3	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%	0.3 100.0%	0.0 0.0%	0.0 0.0%	0.0 0.0%
Doctoral-other field	26.1	0.0 0.0%	12.6 48.3%	3.3 12.6%	0.0 0.0%	2.8 10.7%	7.4 28.4%	0.0 0.0%	0.0 0.0%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

An analysis of primary position title by race/ethnicity shows that LPN/VNs hold a wide variety of titles (Table 82).

TABLE 82

Primary Position Title, by Race/Ethnicity

Primary Position Title	n	Race/Ethnicity							
		American Indian or Alaska Native	Asian	Black/ African American	Native Hawaiian or Other Pacific Islander	White/ Caucasian	Hispanic/ Latino	Other	Mixed
Advanced practice nurse	396.8	3.5 0.9%	13.7 3.5%	80.4 20.3%	2.3 0.6%	255.8 64.5%	28.2 7.1%	5.5 1.4%	7.4 1.9%
Case manager	594.5	6.7 1.1%	19.5 3.3%	118.0 19.8%	0.4 0.1%	375.4 63.1%	52.2 8.8%	1.0 0.2%	21.3 3.6%
Clinical nurse leader	863.6	5.9 0.7%	40.9 4.7%	136.4 15.8%	1.3 0.2%	571.3 66.2%	76.5 8.9%	7.5 0.9%	23.8 2.8%
Consultant	140.6	0.6 0.4%	6.9 4.9%	21.4 15.2%	0.0 0.0%	106.4 75.7%	3.2 2.3%	1.4 1.0%	0.7 0.5%
Nurse executive	137.1	4.6 3.4%	0.1 0.1%	12.2 8.9%	3.8 2.8%	107.5 78.4%	7.2 5.3%	1.4 1.0%	0.3 0.2%
Nurse faculty	964.8	9.7 1.0%	48.3 5.0%	132.9 13.8%	11.5 1.2%	653.9 67.8%	64.7 6.7%	5.4 0.6%	38.4 4.0%
Nurse manager	1,348.3	9.8 0.7%	18.1 1.3%	176.2 13.1%	1.0 0.1%	1,029.4 76.3%	62.2 4.6%	21.9 1.6%	29.7 2.2%
Nurse researcher	64.9	0.7 1.1%	6.9 10.6%	8.9 13.7%	0.0 0.0%	45.9 70.7%	2.5 3.9%	0.0 0.0%	0.0 0.0%
Staff nurse	16,110.8	135.4 0.8%	985.7 6.1%	2,587.8 16.1%	69.1 0.4%	10,635.8 66.0%	1,099.3 6.8%	244.7 1.5%	353.0 2.2%
Other-health related	2,564.0	32.6 1.3%	166.0 6.5%	450.5 17.6%	17.9 0.7%	1,636.3 63.8%	177.2 6.9%	38.4 1.5%	45.1 1.8%
Other-not health related	232.3	2.1 0.9%	4.8 2.1%	24.3 10.5%	0.0 0.0%	166.3 71.6%	21.1 9.1%	0.7 0.3%	13.0 5.6%

Note. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Education

When asked to indicate highest level of education, 64.9% of respondents in the current study indicated that they had obtained a vocational/practical certificate in nursing (Table 83).

TABLE 83

Highest Level of Education

	(*n* = 30,017.9)	Percentage
Vocational/practical certificate-nursing	19,481.3	64.9%
Diploma-nursing	3,882.5	12.9%
ADN	1,888.6	6.3%
Associate's degree-other field	2,243.9	7.5%
BSN	308.5	1.0%
Baccalaureate degree-other field	1,795.4	6.0%
MSN	13.9	0.0%
Master's degree-other field	352.2	1.2%
Doctoral degree-nursing practice (DNP)	0.6	0.0%
Doctoral degree-nursing (PhD)	0.0	0.0%
Doctoral degree-nursing other	1.0	0.0%
Doctoral degree-other field	50.0	0.2%

The majority (95.1%) of LPNs received their entry-level education in the United States, while 4.9% received their entry-level education in other countries, such as the Philippines (1.9%), Canada (0.1%), India (0.2%), and other countries (2.8%).

Year Licensed by Education

An examination of year licensed cohort by initial nursing education revealed a decreasing trend of those with certificates as initial nursing education (Table 84).

TABLE 84

Year Licensed, by Initial Nursing Education

	Year Licensed			
Initial Nursing Education	**Licensed Prior to 2000 (*n* = 11,644.8)**	**Licensed 2000-2009 (*n* = 6,513.6)**	**Licensed 2010-2012 (*n* = 3,427.1)**	**Licensed 2013-2015 (*n* = 3,204.4)**
Vocational/practical certificate-nursing	10,175.8 87.4%	5,280.1 81.1%	2,756.9 80.5%	2,541.1 79.3%
Diploma-nursing	1,124.9 9.7%	911.0 14.0%	488.1 14.2%	473.8 14.8%
ADN	305.3 2.6%	279.2 4.3%	179.2 5.2%	165.9 5.2%
BSN	38.6 0.3%	43.2 0.7%	2.8 0.1%	23.6 0.7%

Employment

The current study's results revealed 77.0% of licensees were actively employed in nursing and 61.2% of licensees were employed full time (Table 85). Of note, results indicated 10.3% were unemployed; however, only 5.1% were actively seeking work as a nurse.

TABLE 85

Employment Status

	(*n* = 30,766.0)	Percentage
Actively employed in nursing	23,680.0	77.0%
Full time	18,823.4	61.2%
Part time	3,714.0	12.1%
Per diem	2,179.4	7.1%
Actively employed in a field other than nursing	2,690.8	8.7%
Full time	1,504.3	4.9%
Part time	868.5	2.8%
Per diem	386.7	1.3%
Working in nursing only as a volunteer	366.1	1.2%
Unemployed		
Seeking work as a nurse	1,558.7	5.1%
Not seeking work as a nurse	1,588.9	5.2%
Retired	2,927.1	9.5%

Note. Respondents were asked to mark all that applied. Percentages are calculated off of responding sample.

The Unemployed

Of respondents who indicated they were unemployed, 3.3% indicated the reason was because of taking care of home and family (Table 86). Another 23.1% indicated difficulty in finding a nursing position as their reason for unemployment.

TABLE 86

Reasons for Unemployment

	(*n* = 2,644.5)	Percentage
Taking care of home and family	1,033.0	39.1%
Disabled	463.3	17.5%
Inadequate salary	77.9	2.9%
In school	393.9	14.9.%
Difficulty in finding a nursing position	610.4	23,1%
Other, please specify	636.8	24.1.%

Note. Respondents were asked to mark all that applied.

Year Licensed by Employment Status

Results of year licensed cohort by employment status revealed a higher employed in nursing rate for those licensed after 2010 (Table 87), approximately 87%, as compared to LPN/VNs licensed prior to 2000 (69.7%). Additionally, LPN/VNs licensed from 2013 to 2015 had the highest unemployed and seeking work as a nurse rate (8.4%).

TABLE 87

Year Licensed, by Employment Status

	Year Licensed			
Employment Status	**Licensed Prior to 2000 (*n* = 11,867.0)**	**Licensed 2000-2009 (*n* = 6,602.1)**	**Licensed 2010-2012 (*n* = 3,501.6)**	**Licensed 2013-2015 (*n* = 3,260.4)**
Employed in nursing (overall)	8,276.9 69.7%	5,544.0 84.0%	3,052.0 87.2%	2,830.6 86.8%
Full time	6,472.1 54.5%	4,701.2 71.2%	2442.3 69.7%	2,120.8 65.0%
Part time	1,413.5 11.9%	637.8 9.7%	448.5 12.8%	527.0 16.2%
Per diem	732.3 6.2%	432.9 6.6%	327.0 9.3%	347.8 10.7%
Employed in other field*	774.5 6.5%	282.9 4.3%	141.2 4.0%	110.1 3.4%
Unemployed, seeking work as a nurse	418.2 3.5%	362.1 5.5%	208.0 5.9%	272.4 8.4%

Note. Columns do not sum to year licensed *n*'s and percentages do not sum to 100% because the employment status question had additional response options and respondents could select multiple options. Some respondents may have selected "actively employed in nursing"; however, they may not have specified full time or part time. Hence, those numbers will not sum to "actively employed in nursing" totals.

*Is not employed in nursing.

Practice Specialty

In the current study, 27.6% of LPN/VNs reported their primary practice specialty as geriatric/gerontology, followed by other (15.5%), primary care (7.7%), and pediatric specialty (6.0%) (Table 88).

TABLE 88

Primary Employment Specialty

	(*n* = 21,932.4)	**Percentage**
Acute care/critical care	458.5	2.1%
Adult health/family health	960.6	4.4%
Anesthesia	18.0	0.1%
Community	262.6	1.2%
Emergency/trauma	157.2	0.7%
Genetics	182.2	0.8%
Geriatric/gerontology	6,064.1	27.6%
Home health	2,109.3	9.6%
Informatics	41.4	0.2%
Maternal-child health	120.5	0.5%
Medical-surgical	777.3	3.5%
Neonatal	28.2	0.1%
Nephrology	133.7	0.6%
Neurology/neurosurgical	90.6	0.4%
Occupational health	154.5	0.7%
Oncology	137.1	0.6%
Orthopedic	185.5	0.8%
Palliative care/hospice	348.2	1.6%

	(*n* = 21,932.4)	Percentage
Pediatrics	1,326.0	6.0%
Perioperative	93.1	0.4%
Primary care	1,695.5	7.7%
Psychiatric/mental health/substance abuse	1,084.8	4.9%
Public health	173.1	0.8%
Radiology	24.2	0.1%
Rehabilitation	847.7	3.9%
School health	612.9	2.8%
Urologic	102.1	0.5%
Women's health	342.8	1.6%
Other	3,400.7	15.5%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing.

Average Hours Worked

The current study found that the average number of hours worked during a typical week for LPN/VNs was 37.9 hours (*SD* = 13.0). Those LPN/VNs who worked one nursing job worked an average of 37.1 hours per week (*SD* = 11.2). Respondents age 45 to 49 tended to work the most hours per week (39.6). With the exception of respondents age 65 and older (28.9 hours), there were very small differences in average hours worked per week.

An examination of average hours worked per week by age-group revealed a similar number of hours per week across age-groups (i.e., 40.7–42.8 hours). However, primary employment setting by age-group could vary; for example, in public health, 26.4% of public health nurses were younger than age 35, while 8.1% were age 60 or older.

Telehealth Utilization and Communication

Respondents were asked to indicate the percentage of time they provided nursing services or communicated with a patient or client located somewhere different from where they were located, via phone or electronically. Those who reported providing telehealth services were asked to indicate if services were provided across a state or national border (Table 89). Results revealed that 53.9% of respondents never engaged in telehealth, while 23.3% engaged in telehealth between 1% and 25% of their time. Of respondents who engaged in telehealth, 66.2% never engaged in telehealth across a state border, while 27.5% engaged in telehealth across a state border between 1% and 25% of their time. Of respondents who engaged in telehealth, 92.0% never engaged in telehealth across a national border, while 5.7% engaged in telehealth across a national border between 1% and 25% of their time

TABLE 89

Telehealth Utilization

			Time Percentage				
	n		Never	1%-25%	26%-50%	51%-75%	76%-100%
Percent utilizing telehealth	23,619.9		12,723.1 53.9%	5,496.6 23.3%	2,207.1 9.3%	1,490.6 6.3%	1,702.4 7.2%
Telehealth Utilization Across a State Border							
			Time Percentage				
	n	**Not Applicable***	**Never**	**1%-25%**	**26%-50%**	**51%-75%**	**76%-100%**
Percent utilizing telehealth across state border	11,421.5	11,387.9	7,566.5 66.2%	3,140.4 27.5%	371.1 3.2%	180.4 1.6%	163.1 1.4%

Telehealth Utilization Across a National Border

			Time Percentage				
	n	**Not Applicable***	**Never**	**1%-25%**	**26%-50%**	**51%-75%**	**76%-100%**
Percent utilizing telehealth across a national border	11,089.2	12,029.2	10,201.8 92.0%	633.3 5.7%	129.0 1.2%	82.0 0.7%	43.1 0.4%

*Does not provide nursing services or communicate with remote patients or clients.

Respondents were asked to describe the mode(s) of communication they used to provide nursing services or communicate with a remote patient or client (Table 90). Of respondents who engaged in telehealth, the large majority (58.9%) used the telephone, followed by e-mail (18.2%) and electronic messaging (13.5%).

TABLE 90

Modes of Communication Used for Telehealth

	(*n* =14,431.5)	**Percentage**
Not applicable; does not provide nursing services or communicate with remote patients or clients	*14,531.4*	
Telephone	8,498.5	58.9%
E-mail	2,622.2	18.2%
Electronic messaging (ex: text message, instant message)	1,947.7	13.5%
Video call	207.4	1.4%
Voice over internet protocol (VoIP) (Skype, FaceTime)	187.7	1.3%
Virtual ICU (also known as: tele-ICU, remote ICU, eICU)	84.9	0.6%
Other	883.0	6.1%

Note. Respondents were asked to mark all that applied

Annual Earnings

The salary of LPN/VNs was not reported in the 2013 National Workforce Survey of Registered Nurses, but was reported in the HRSA (2010) survey. Please see Appendix D or HRSA (2010) for specific item wording. In the current study, 30.2% of the overall respondents did not answer the primary nursing position earnings question; hence, item nonresponse bias could be impacting the results. Both upper and lower limits for the salary variable were set conservatively and remaining extreme values could be skewing mean values upward; the discussion of the salary figures relies on the median values as being the more accurate measure of central tendency.

The median LPN/VN pre-tax annual earnings from their primary nursing position was $38,000; LPN/VNs also reported median earnings of $10,000 from a secondary nursing position (Table 91).

TABLE 91

2014 Pre-Tax Annual Earnings from Primary Nursing Position

	n	**Median**
Overall	19,084.0	$38,000.00

2014 Pre-Tax Annual Earnings from Secondary Nursing Position

	n	**Median**
Overall	2,392.0	$10,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Average Salary by Age, Year Licensed, Gender, and Race/Ethnicity

When broken out by age, LPN/VN earnings from their primary position show a steady rise up to the 40–45 age-group, where the median salary peaks at $40,000 (Table 92).

TABLE 92

Annual Earnings in Primary Nursing Position, by Age

	n	Median
Younger than 30	1,438.0	$32,000.00
30-34	1,510.0	$36,000.00
35-39	1,599.0	$36,000.00
40-44	1,853.0	$40,000.00
45-49	1,908.0	$40,000.00
50-54	2,422.0	$40,000.00
55-59	2,864.0	$40,000.00
60-64	2,479.0	$40,000.00
65 and older	1,309.0	$35,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

The median salary for LPN/VNs licensed prior to 2010 was $40,000, while more newly licensed LPN/VNs made lower median salaries (Table 93).

TABLE 93

Annual Earnings in Primary Nursing Position, by Year Licensed

	n	Median
Licensed prior to 2000	8,393.0	$40,000.00
Licensed 2000-2009	4,131.0	$40,000.00
Licensed 2010-2012	2,190.0	$36,000.00
Licensed 2013-2015	1,539.0	$30,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

The median earnings for male LPN/VNs was $43,200, while the median earnings for female LPN/VNs was $38,000 (Table 94).

TABLE 94

Average Salary in Primary Nursing Position, by Gender

	n	Median
Female	16,964.0	$38,000.00
Male	1,044.0	$43,200.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

The median earnings for White/Caucasian LPN/VNs was $37,000; Hispanic LPN/VNs, $40,000; Black/African American LPN/VNs, $40,000; and Asian LPN/VNs, $45,000 (Table 95). The fact that White/Caucasian LPN/VNs exhibited the lowest median salary may be a function of the geographic distribution of races across the United States, with White/Caucasian nurses more predominantly located in states with lower salaries.

TABLE 95

Average Salary in Primary Nursing Position, by Race/Ethnicity

	n	Median
American Indian or Alaska Native	217.0	$40,000.00
Asian	613.0	$45,000.00
Black/African American	2,476.0	$40,000.00
Native Hawaiian or Other Pacific Islander	70.0	$50,000.00
White/Caucasian	14,304.0	$37,000.00
Hispanic/Latino	656.0	$40,000.00
Other	181.0	$40,000.00
Mixed	473.0	$39,600.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses. Respondents were asked to mark all that applied for Race/Ethnicity. However, responses were coded to be mutually exclusive. If respondents selected multiple options, they were coded as Mixed Race/Ethnicity.

Average Salary by Education

When broken out by highest level of education, the highest median earnings were for LPN/VNs with a BSN or master's-other field ($45,000) (Table 96).

TABLE 96

Average Salary in Primary Nursing Position, by Highest Level of Education

	n	Median
Vocational/practical certificate-nursing	11,669.0	$38,000.00
Diploma	2,737.0	$37,000.00
ADN	1,518.0	$38,000.00
Associate's-other field	1,388.0	$38,000.00
BSN	140.0	$45,000.00
Baccalaureate-other field	1,015.0	$40,000.00
MSN	3.0	$32,000.00
Master's-other field	171.0	$45,000.00
Doctoral-other field	13.0	$35,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Average Salary Across States, Employment Status, Employment Setting, Position Title, and Specialty

When broken out by state, the highest median earnings were for LPN/VNs practicing in Alaska ($50,000) and Washington, DC ($53,000). The lowest median earnings (not including the territories) were for LPN/VNs practicing in South Dakota ($30,000) and West Virginia ($32,000) (Table 97).

TABLE 97

Average Salary in Primary Nursing Position, by State(s) Where Currently Practicing

	n	Median		*n*	Median
Alabama	552.0	$33,000.00	New Hampshire	381.0	$42,000.00
Alaska	99.0	$50,000.00	New Jersey	344.0	$45,000.00
Arizona	334.0	$48,000.00	New Mexico	284.0	$45,000.00

	n	Median		*n*	Median
Arkansas	488.0	$33,500.00	New York	294.0	$40,000.00
California	420.0	$45,000.00	North Carolina	465.0	$38,000.00
Colorado	326.0	$42,000.00	North Dakota	411.0	$35,000.00
Connecticut	274.0	$49,000.00	Ohio	448.0	$34,000.00
Delaware	257.0	$45,000.00	Oklahoma	428.0	$35,000.00
Florida	469.0	$37,000.00	Oregon	382.0	$42,240.00
Georgia	421.0	$36,000.00	Pennsylvania	513.0	$39,000.00
Hawaii	207.0	$45,000.00	Rhode Island	208.0	$45,000.00
Idaho	303.0	$32,560.00	South Carolina	445.0	$37,124.00
Illinois	449.0	$40,000.00	South Dakota	348.0	$30,000.00
Indiana	384.0	$36,000.00	Tennessee	536.0	$34,000.00
Iowa	370.0	$34,640.00	Texas	499.0	$40,082.00
Kansas	406.0	$35,000.00	Utah	276.0	$36,000.00
Kentucky	397.0	$35,000.00	Vermont	258.0	$37,128.00
Louisiana	471.0	$35,000.00	Virginia	356.0	$36,000.00
Maine	278.0	$36,000.00	Washington	468.0	$44,000.00
Maryland	369.0	$45,000.00	West Virginia	295.0	$32,000.00
Massachusetts	468.0	$48,000.00	Wisconsin	386.0	$35,000.00
Michigan	398.0	$35,000.00	Wyoming	166.0	$40,000.00
Minnesota	550.0	$33,000.00	DC	93.0	$53,000.00
Mississippi	402.0	$35,000.00	Virgin Islands	7.0	$35,000.00
Missouri	428.0	$34,000.00	Guam	22.0	$34,000.00
Montana	345.0	$36,260.00	American Samoa	7.0	$30,000.00
Nebraska	510.0	$33,000.00	Northern Mariana Islands	3.0	$55,000.00
Nevada	343.0	$48,000.00			

Note. Respondents could select more than one jurisdiction. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

LPN/VNs working full time ($40,000) made a higher median salary versus those working part time ($25,000) or per diem ($28,000) (Table 98).

TABLE 98

Average Salary in Primary Nursing Position, by Employment Status

	n	Median
Employed in nursing (overall)	18,729.0	$38,000.00
Full time	15,012.0	$40,000.00
Part time	2,992.0	$25,000.00
Per diem	1,523.0	$28,000.00
Employed in other field (overall)*	152.0	$45,000.00
Full time*	114.0	$50,000.00
Part time*	29.0	$22,000.00
Per diem*	18.0	$25,000.00

Note. Columns do not sum to year licensed *n*'s and percentages do not sum to 100% because the employment status question had additional response options and respondents could select multiple options. Some respondents may have selected "actively employed in nursing"; however, they may not have specified full time or part time. Hence, those numbers will not sum to "actively employed in nursing" totals.

Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

*Is not employed in nursing.

When broken out by employment setting, LPN/VNs working in insurance ($52,000) and policy/regulatory agencies ($52,000) made the highest median salaries, while those working in school health ($25,000) made the lowest (Table 99).

TABLE 99

Average Salary in Primary Nursing Position, by Primary Employment Setting

	n	Median
Academic	97.0	$36,000.00
Ambulatory care	2,014.0	$40,000.00
Assisted living	1,013.0	$38,000.00
Community health	831.0	$34,000.00
Correctional	471.0	$42,000.00
Home health	2,185.0	$36,000.00
Hospital	1,999.0	$39,860.00
Insurance	205.0	$52,000.00
Nursing home/extended care	5,597.0	$40,000.00
Occupational health	145.0	$40,000.00
Policy/regulatory/licensing	23.0	$50,000.00
Public health	308.0	$32,000.00
School health	495.0	$25,000.00
Other	2,838.0	$37,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Nurse executives ($62,000) and consultants ($50,000) made the highest median salaries, while those with titles of "staff nurse" ($37,000) or "nurse faculty" ($34,000) made the lowest (Table 100).

TABLE 100

Average Salary in Primary Nursing Position, by Primary Position Title

	n	Median
Advanced practice nurse	277.0	$40,000.00
Case manager	407.0	$46,000.00
Clinical nurse leader	691.0	$40,000.00
Consultant	77.0	$50,000.00
Nurse executive	92.0	$62,000.00
Nurse faculty	651.0	$34,000.00
Nurse manager	1,089.0	$46,000.00
Nurse researcher	49.0	$42,000.00
Other-health related	1,920.0	$38,000.00
Other-not health related	137.0	$35,000.00
Staff nurse	13,265.0	$37,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

LPN/VNs with the employment specialties of anesthesia ($56,556) and radiology ($50,000) made the highest median salaries, while those with specialties of orthopedic ($33,000) and school health ($25,000) made the lowest (Table 101).

TABLE 101

Average Salary in Primary Nursing Position, by Primary Employment Specialty

	n	Median
Acute care/critical care	373.0	$40,000.00
Adult health/family health	818.0	$35,000.00
Anesthesia	16.0	$56,556.00
Community	206.0	$35,000.00
Emergency/trauma	111.0	$39,000.00
Genetics	153.0	$38,000.00
Geriatric/gerontology	5,068.0	$40,000.00
Home health	1,376.0	$37,000.00
Informatics	47.0	$45,000.00
Maternal-child health	119.0	$38,000.00
Medical-surgical	639.0	$38,000.00
Neonatal	22.0	$37,284.00
Nephrology	107.0	$39,000.00
Neurology/neurosurgical	86.0	$38,000.00
Occupational health	139.0	$40,000.00
Oncology	98.0	$42,000.00
Orthopedic	172.0	$33,000.00
Palliative care/hospice	212.0	$40,000.00
Pediatrics	921.0	$35,000.00
Perioperative	78.0	$45,000.00
Primary care	1,601.0	$36,379.00
Psychiatric/mental health/substance abuse	867.0	$38,000.00
Public health	128.0	$41,000.00
Radiology	15.0	$50,000.00
Rehabilitation	634.0	$42,000.00
School health	441.0	$25,000.00
Urologic	92.0	$39,000.00
Women's health	276.0	$38,000.00
Other	2,714.0	$40,000.00

Note. Respondents who obtained initial U.S. licensure in 2015 were removed from analyses. Includes overtime and bonuses, but excludes sign-on bonuses.

Foreign-Educated Nurses

Approximately 95.1% of respondents received their entry-level education in the United States; thus, in the current study 4.9% indicated being foreign-educated nurses.

Age, Gender, and Education

An analysis of foreign-educated LPN/VNs' status by age revealed lower percentages of foreign-educated nurses younger than age 40 and higher percentages of nurses between the ages of 40 and 50 when compared to U.S.-educated nurses (Table 102).

TABLE 102

Foreign-Educated Status, by Age

		Age								
Foreign-Educated Status	***n***	**Younger Than 30**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65 and Older**
U.S.-educated	25,477.8	2,559.9 10.1%	2,471.5 9.7%	2,590.9 10.2%	3,068.5 12.0%	3,071.6 12.1%	2,864.7 11.2%	3,248.2 12.8%	3,070.8 12.1%	2,531.7 9.9%
Foreign-educated	1,082.8	73.1 6.8%	78.3 7.2%	61.4 5.7%	189.3 17.5%	212.7 19.7%	138.2 12.8%	158.0 14.6%	106.3 9.8%	65.4 6.0%

An analysis of gender by foreign-education status indicated a much larger percentage of foreign-educated LPN/VNs were male (22.7%) compared to U.S.-educated LPN/VNs (6.7%) (Table 103).

TABLE 103

Foreign-Educated Status, by Gender

	Foreign-Educated Status	
Gender	**U.S.-Educated (*n* = 27,021.7)**	**Foreign-Educated (*n* = 1,183.3)**
Male	1,812.0 6.7%	269.0 22.7%
Female	25,209.1 93.3%	914.3 77.3%

An analysis of highest level of education revealed that 17.6% of foreign-educated LPN/VNs held BSNs compared to 0.3% for U.S.-educated LPN/VNs (Table 104).

TABLE 104

Foreign-Educated Status, by Highest Level of Education

	Foreign-educated status	
Highest Level of Education	**U.S.-Educated (*n* = 28,098.7)**	**Foreign-Educated (*n* = 1,214.5)**
Vocational/practical certificate-nursing	18,619.8 66.3%	390.2 32.1%
Diploma	3,638.2 12.9%	148.8 12.3%
ADN	1,785.4 6.4%	67.3 5.5%
Associate's-other field	2,125.0 7.6%	85.3 7.0%
BSN	85.3 0.3%	213.4 17.6%
Baccalaureate-other field	1,538.1 5.5%	228.5 18.8%
MSN	6.9 0.0%	0.3 0.0%
Master's-other field	268.8 1.0%	61.6 5.1%

Highest Level of Education	Foreign-educated status	
	U.S.-Educated (*n* = 28,098.7)	Foreign-Educated (*n* = 1,214.5)
DNP	0.0 0.0%	0.6 0.0%
PhD-nursing	0.0 0.0%	0.0 0.0%
Doctoral-nursing other	1.0 0.0%	0.0 0.0%
Doctoral-other field	30.3 0.1%	18.4 1.5%

Employment Setting and Licensure

An analysis of primary employment setting indicated a similar breakdown between U.S.-educated nurses and foreign-educated nurses. However, a higher percentage of foreign-educated LPN/VNs (39.2%) indicated working in a nursing home/extended care setting compared to 29.6% of U.S.-educated LPN/VNs. Primary position titles and primary employment specialty indicated similar distributions between U.S.-educated LPN/VNs and foreign-educated LPN/VNs.

An analysis of number of licenses held indicated foreign-educated nurses were more likely to hold multiple licenses (3.4%) versus U.S.-educated nurses (1.9%). On average, foreign-educated LPN/VNs worked slightly more hours during a typical week (M = 39.3, SD = 16.6) versus U.S.-educated LPN/VNs (M = 37.8, SD = 16.6). Additionally, foreign-educated LPN/VNs were more like to work two or more positions (21.8%) compared to U.S-educated LPN/VNs (15.1%)

Discussion and Implications

Approximately 121,000 LPNs/VNs were included in the sample; 32,263 responded (28.0%). These data provide the most recent and detailed information on characteristics of licensed LPN/VNs, such as age, diversity, education, employment setting, position title, employment specialty, and salary. Data and research on the nursing workforce are often focused more on RNs and less so on LPN/VNs; therefore, the present study was a critical addition to nursing workforce data.

The average age of LPN/VNs was 47.8. Overall, 77.0% of LPNs were employed in nursing. However, data indicated that LPN/VNs older than age 60 were less likely to be employed in nursing as compared to the younger-than-age-30 cohort. Thus, the evidence does not suggest a large number of LPN/VNs will be retiring and leaving a gap in supply. This finding supports an employment trend similar to what Coffman, Chan, and Bates (2015) reported using 2008 and 2013 American Community Survey data.

In terms of diversity, starting with racial/ethnic diversity, 31.9% of responding LPN/VNs identified themselves as a minority, while 68.1% of the respondents were White/Caucasian. This study's racial/ethnic diversity results are similar to HRSA's (2015) brief on gender and racial/ethnic diversity of U.S. health occupations for 2010–2012, which found a 68.2% white (non-Hispanic) LPN/VN workforce, and to Coffman et al. (2015), who reported a 61% white workforce. The largest reporting minority group was Black/African American, at 15%; however, larger percentages of minorities were younger as compared to nearing retirement, suggesting the workforce will become more diverse as the younger-age cohorts advance. In terms of gender diversity, data revealed that 7.5% of the LPN/VN workforce was male, 0.8% to 1.5% lower than two other recent analyses of gender in the LPN/VN workforce (Coffman, Chan, & Bates, 2015; HRSA, 2015). However, this study also found increasing proportions of males in more recently licensed cohorts, suggesting higher percentages of males in the LPN/VN workforce in the future.

Over two-thirds of LPN/VNs indicated their highest level of education was a vocational/practical certificate in nursing and the vast majority (95.1%) were educated in the United States. The 4.9% of LPN/VNs who were educated outside the United States tended to have achieved higher levels of education: 17.6% of foreign-educated LPN/VNs held BSN degrees compared to 0.3% of U.S.-educated LPN/VNs. While it is unclear from the current study why foreign-educated LPN/VNs had a higher rate of BSN degrees, it is possible that educational, testing, and other licensure requirements may have prevented them from working as RNs in the United States.

The most common primary care setting of LPN/VNs respondents was in nursing home/extended care (30%), followed by 15% in home health and approximately 11% in hospitals. Similarly, approximately 25% of LPN/VNs reported their primary practice specialty as geriatric/gerontology; this was the most common specialty of LPN/VNs in all licensure cohorts. These findings support a report by Coffman et al. (2015) that indicated long-term care employs more LPN/VNs than any other industry. In fact, the number of LPN/VNs working in long-term care increased from 258,670 in 2008 to 289,946 in 2013, an increase of 13%, while the number of LPN/VNs working in hospitals, outpatient care, and other sectors decreased by 20%. Position titles are likely

similar in both types of settings; over two-thirds of LPN/VNs' primary title was "staff nurse." The current survey also found that almost 50% of LPN/VNs provided patient care services utilizing telehealth technologies; 17% did so across a state border, and 4% engaged in telehealth across a national border.

Median salaries of LPN/VNs differed by employment setting, position title, and other demographic characteristics. While the overall median earnings and the median earnings for female LPN/VNs was $38,000, the median earnings for male LPN/VNs was $43,000. Results showed that median salaries differed considerably based on geographic region: Washington, DC, and Alaska had the highest salaries and South Dakota and West Virginia, the lowest.

Limitations

Limitations of the current study include a response rate of 28.0%, which was lower than the response rates for a similar sample of RNs (34.3%). To supplement this statistic, a nonresponse bias analysis was conducted and indicated a slight overrepresentation of three distinct variables: white/Caucasian, female, 60 and older in the responding sample. As described earlier, gender and age were used to make nonresponse weighting adjustments, along with weighting adjustments for differing nursing population sizes across states. An additional limitation was missing or incomplete data. While the large sample size partially compensated for this, certain *item* nonresponse bias could have impacted the results, such as salary (39.0% did not answer): Both upper and lower limits had been set on the salary figures; however, extreme values could still have skewed mean values upward; the medians were likely the more accurate statistic versus the mean for the measure of central tendency. Data used for comparison may have vastly different samples; for instance, the HRSA (2015) brief on gender and racial/ethnic diversity of U.S. health occupations used data on a U.S. working-age population age 16 or older who were currently employed or who were recently employed and were seeking employment (e.g., individuals who were recently laid off). Lastly, the data on telehealth may not be directly comparable to other statistics on this topic. Tracking trends in telehealth will require consistent use of common measures for telehealth use.

Conclusion

The current LPN/VN workforce is expected to change in terms of the ratios of racial/ethnic minority groups and of men to women; an impending shortage is not expected as a result of older LPN/VNs retiring. Changes in the health care environment are especially relevant for LPN/VNs because position setting demand may be changing as the health care environment calls for higher levels of nursing education. One potential piece of evidence showcasing this trend in higher levels of nursing education is discussed by Coffman et al. (2015), who reported that the LPN/VN workforce in the United States is declining in size, from 675,918 in 2008 to 635,975 in 2013, a decrease of 6%. The supply and demand of LPN/VNs will be affected by many other factors, including population growth, aging of the population, and economic conditions. This national survey of LPN/VNs represents one point in time; future workforce surveys on the supply of LPN/VNs may help illuminate additional workforce trends for this important segment of the nursing population.

References

AcademyHealth. (2007). *U.S.-based international nurse recruitment: Structure and practices of a burgeoning industry.* Retrieved from www.intlnursemigration.org/assets/pdfs/Report-on-Year-I.pdf

American Association of Colleges of Nursing. (2015). *Nursing faculty shortage fact sheet.* Retrieved from www.aacn.nche.edu/media-relations/FacultyShortageFS.pdf

American Association of Public Opinion Research. (2015). *Standard definitions.* Retrieved from http://www.aapor.org/Standards-Ethics/Standard-Definitions-(1).aspx

American Well. (2015). *Telehealth index: 2015 consumer survey.* Retrieved from http://info.americanwell.com/telehealth-index-2015-consumer-survey

Budden, J. S., Zhong, E. H., Moulton, P., & Cimiotti, J. P. (2013). The National Council of State Boards of Nursing and The Forum of State Nursing Workforce Centers 2013 National Workforce Survey of Registered Nurses. *Journal of Nursing Regulation, 4(*supplement), S1–S72.

Buerhaus, P. I., Auerbach, D. I., & Staiger, D. O. (2014). The rapid growth of graduates from associate, baccalaureate, and graduate programs in nursing. *Nursing Economic$, 32,* 290–295, 311.

Coffman, J. M., Chan, K., & Bates, T. (2015). *Profile of the licensed practical nurse/licensed vocational nurse workforce, 2008 and 2013.* Retrieved from http://healthworkforce.ucsf.edu/sites/healthworkforce.ucsf.edu/files/Report-Profile_of_the_Licensed_Practical_Nurse_Licensed_Vocational_Nurse_Workforce_2008_and_2013.pdf

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method* (3rd ed.). Hoboken, NJ: Wiley.

Health Resources and Services Administration. (2010). *The registered nurse population: Findings from the 2008 National Sample Survey of Registered Nurses.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/rnsurvey2008.html

Health Resources and Services Administration. (2012). *Highlights from the 2012 National Sample Survey of Nurse Practitioners.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/supplydemand/nursing/nursepractitionersurvey/npsurveyhighlights.pdf

Health Resources and Services Administration. (2013). *The U.S. nursing workforce: Trends in supply and education.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/reports/nursingworkforce/

Health Resources and Services Administration. (2014). *The future of the nursing workforce: National- and state-level projections, 2012–2025.* Retrieved from http://bhpr.hrsa.gov/healthworkforce/supplydemand/nursing/workforceprojections/nursingprojections.pdf

Health Resources and Services Administration. (2015). *Sex, race, and ethnic diversity of U.S. health occupations (2010–2012).* Retrieved from http://bhpr.hrsa.gov/healthworkforce/supplydemand/usworkforce/diversityushealthoccupations.pdf

HIMSS Analytics. (2015). *Essentials brief: Telemedicine study.* Retrieved from www.himssanalytics.org/research/essentials-brief-telemedicine-study

Institute of Medicine. (2010). *The future of nursing: Focus on education.* Retrieved from www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health/Report-Brief-Education.aspx

Institute of Medicine. (2015). *Assessing progress on the Institute of Medicine report The Future of Nursing.* Washington, DC: National Academies Press.

Moulton, P. L., Wiebusch, P. L., Cleary, B. L., Brunell, M. L., Napier, D. F., Bienemy, C., … Cimiotti, J. P. (2013). Toward standardization (part 2): National nursing minimum data sets consensus building and implementation status. *Policy, Politics and Nursing Practice, 13,* 162–169.

Muench, U., Sindelar, J., Busch, S., & Buerhaus, P. I. (2015). Salary differences between male and female registered nurses in the United States. *Journal of the American Medical Association, 313*(12), 1265–1267.

National Council of State Boards of Nursing. (2013). *APRNs in the U.S.* Retrieved from www.ncsbn.org/aprn.htm .

Nooney, J., Cleary, B., Moulton, P., Wiebusch, P., Murray, J., Yore, M., & Brunell, M. (2010). Towards standardization (part 1): Assessment of state and national nursing workforce data sources. *Policy, Politics and Nursing Practice, 11,* 173–183.

U.S. Bureau of Labor Statistics. (2014). *Occupational outlook handbook.* Retrieved from www.bls.gov/ooh/healthcare/registered-nurses.htm

U.S. Census Bureau. (2015). *State & county quickfacts.* Retrieved from http://quickfacts.census.gov

Appendix A – Registered Nurse Nonresponse Analyses and Sample Weighting

A formal nonresponse bias analysis was conducted following the close of the survey. Although response rates are a valuable indicator of survey quality, they may not be a good measure of response bias. An analysis of basic demographic data (i.e., gender, age, race/ethnicity, number of years since graduation, number of years since first licensed) for all registered nurse (RN) licensees sampled from the Nursys® database was used to compare the survey respondents, and nonrespondents, to determine the representativeness of the survey participants.

The complete data file, or sample, included 140,154 RNs. Variables in the data file came from either the Nursys database (i.e., the frame data) or responses to the survey (i.e., survey data). The variables used in the nonresponse analysis were from the frame and include state, date of birth, gender, ethnicity, original license date, and graduation date. The dependent variable in the analysis was whether or not the sampled RN completed the questionnaire.

Preliminary Analysis

Of the 140,154 RNs in the sample frame, 46,476 responded, for a response rate of 33.2%. This response rate corresponds to the American Association of Public Opinion's Response Rate 1 (the minimum response rate), in which the numerator is the number of completed questionnaires and the denominator is the total sample size (American Association of Public Opinion Research, 2015) (Table A1).

Tables A2 and A3 show the frequencies for the categorical variables. Table A4 shows the descriptive statistics for the continuous variables, while Table A5 shows the number of respondents who had complete data on gender, race, age, years since graduation, and years since initial licensure. These 39,615 RNs were the basis of the nonresponse analysis.

TABLE A1

Response Bias RNs: Response Rate

	(*n* = 140,154)	Percentage
No	93,678	66.8%
Yes	46,476	33.2%

TABLE A2

Response Bias RNs: Gender

		(*n* = 140,154)	Percentage	Valid percent
Valid	Female	92,604	66.1%	91.5%
	Male	8,645	6.2%	8.5%
	Total	101,249	72.2%	100.0%
Missing	Restricted/unknown	6,234	4.4%	
	Missing	32,671	23.3%	
	Total	38,905	27.8%	

TABLE A3

Response Bias RNs: Race/Ethnicity

		(*n* = 140,154)	Percentage	Valid Percent
Valid	White	34,814	24.8%	81.1%
	Black/African American	2,745	2.0%	6.4%
	Asian	2,691	1.9%	6.3%
	Hispanic	1,781	1.3%	4.1%
	Native American	296	0.2%	0.7%
	Pacific Islander	23	0.0%	0.1%
	Other	568	0.4%	1.3%

		(*n* = 140,154)	Percentage	Valid Percent
	Total	42,918	30.6%	100.0%
Missing	Restricted	3,566	2.5%	
	Unknown/blank	69,580	49.6%	
	Not supplied	1,724	1.2%	
	Missing	22,366	16.0%	
	Total	97,236	69.4%	

TABLE A4

Response Bias RNs: Descriptive Statistics for Continuous Measures

	n	*M*	*SD*	Min	Max
Age in years	111,196	47.0	13.4	18	97
Number of years since graduation	102,253	18.0	13.4	0	75
Number of years since original licensure	117,274	15.4	12.6	0	74

TABLE A5

Response Bias RNs: Case Has Complete Data for Nonresponse Analysis

	n	Percentage
No	100,539	71.7%
Yes	39,615	28.3%
Total	140,154	100.0%

Bivariate Analysis

Tables A6 and A7 show the bivariate relationships between the demographic variables from the sample frame and whether or not the respondent completed the survey. There were far fewer men in the database (8,645 compared to 92,604 women) and they were less likely to complete the survey (24.9% compared to 33.9% among women).

TABLE A6

Response Bias RNs: Survey Completion Rate by Gender

		Complete Survey?	
	n	No	Yes
Female	92,604	66.1%	33.9%
Male	8,645	75.1%	24.9%
Total	101,249	66.8%	33.2%

Note. χ^2 (1, n = 101,249) = 292.3, $p < .001$.

From Table A7, nurses who identified as White were most likely to respond, with a response rate of 33.2%. African American and Pacific Islander nurses were least likely to respond, with response rates of 21.8% and 21.7%, respectively.

TABLE A7

Response Bias RNs: Survey Completion Rate by Race/Ethnicity

		Complete Survey?	
Race/Ethnicity	*n*	No	Yes
White	34,814	66.8%	33.2%

		Complete Survey?	
Race/Ethnicity	***n***	**No**	**Yes**
African American	2,745	78.2%	21.8%
Asian	2,691	73.5%	26.5%
Hispanic	1,781	75.7%	24.3%
Native American	296	73.0%	27.0%
Pacific Islander	23	78.3%	21.7%
Other	568	73.9%	26.1%
Total	42,918	68.5%	31.5%

Note. χ^2 (6, n = 42,918) = 248.8, p < .001.

Table A8 displays the mean age of RNs, mean number of years since graduation, and mean number of years since original licensure by completion status. On average, those who completed the survey were 5.2 years older than the nonrespondents; graduated 5.1 years earlier than the nonrespondents; and obtained their original license 4.6 years earlier than the nonrespondents. All relationships were statistically significant.

TABLE A8

Response Bias RNs: Differences in Mean Age, Years Since Graduation, and Years Since Licensure, by Survey Completion

Complete Survey?		Age in Years	Number of Years Since Graduation	Number of Years Since Original Licensure
No	*n*	74,599	68,936	78,585
	M	45.3	16.3	13.9
	SD	12.8	12.4	11.7
Yes	*n*	36,597	33,317	38,689
	M	50.5	21.4	18.5
	SD	13.8	14.6	13.9
Total	*n*	111,196	102,253	117,274
	M	47.0	18.0	15.4
	SD	13.4	13.4	12.6

Note. In all three analyses, *t-tests* show that the relationships were significant at the <.001 level.

Table A9 shows that having complete data on all demographic variables was related to completing the survey. The Cramer's V statistic of -0.022 suggests this difference was of small effect. Therefore, while demographic characteristics themselves were related to response propensity, the lack of information about these characteristics was for the most part not.

Missing data on demographic characteristics were largely a function of the jurisdiction in which the respondent worked. Data on gender were completely missing in eight jurisdictions and largely missing (greater than 95% of RNs) in four. Data on race/ethnicity were completely missing in six jurisdictions and largely missing (90% of RNs or greater) in nine. Date of birth was completely missing in eight jurisdictions. In addition, response rates differed significantly by jurisdiction. The response rates ranged from a low of 18.1% in American Samoa to a high of 45.9% in Wisconsin (χ^2(54, n = 140,154) = 1581.8, p < .001).

TABLE A9

Response Bias RNs: Survey Completion Rate by Status of Data

		Complete Survey?	
Status of Data	***n***	**No**	**Yes**
Incomplete	100,539	66.2%	33.8%
Complete	39,615	68.5%	31.5%

		Complete Survey?	
Status of Data	***n***	**No**	**Yes**
Total	140,154	66.8%	33.2%

Note. χ^2 (1, n = 140,154) = 66.6, p < .0001.

Weights

In the 2013 National Workforce Survey of Registered Nurses study, nonresponse adjustments were not made because of the high degree of missing demographic data in the sample frame. However, for this survey, the gender (27.8% missing) and age (20.7% missing) categories were sufficiently populated to allow for a nonresponse adjustment. The large amount of missing race/ethnicity data (69.4% missing) still made using that category impractical for nonresponse adjustment.

In order to create the combined age and gender (AgeGender) nonresponse weights (i.e., AgeGenderWgtC), the survey response rates for the age variable were compared at the 5-year age-group level and neighboring cells with similar response rates were collapsed. Upon completion of this process, nine age-groups were created (18–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80 or older, missing). These nine age-groups were combined with the gender variable response categories (male, female, missing) to produce 27 AgeGender categories. The survey response rate for each AgeGender category (# responding/# in sample frame) was calculated and used to create each category's weight as follows:

AgeGender Category Weight = Overall Survey Response Rate/AgeGender Category Survey Response Rate

As an example of how this was calculated, there were 201 RNs in the sample frame whose gender was identified as male and whose age was missing. Out of these 201 RNs, 41 responded. The AgeGender response rate for this category was determined to be 41/201 = .20398. The overall survey response rate was 46476/140154 = .331607. So the AgeGender weight for the age missing–gender male category was .331607/.20398 = 1.626.

When the AgeGender weights for each respondent are totaled up, the sum comes to 46,476—the same as the total number of respondents. Table A10 displays the weights for the 27 AgeGender categories.

TABLE A10

Response Bias RNs: AgeGender Weights

Age-Group	Gender: Missing	Gender: Female	Gender: Male
18-49	1.457	1.254	1.647
50-54	1.084	0.967	1.277
55-59	0.948	0.816	1.075
60-64	0.852	0.723	0.894
65-69	0.698	0.648	0.727
70-74	0.534	0.605	0.742
75-79	0.551	0.570	1.036
80 or older	0.516	0.558	0.531
Age missing	0.959	1.144	1.626

In a similar manner, post-stratification weights (i.e., JurisdictionWgtC) were constructed at the state level to adjust for differing sampling rates across states. However, these adjustments were made not by comparing the number of responses responses in a state in its sample frame count (i.e., the number of nurses sampled from a state), but rather by comparing the number of responses to the number of licensees in that state. Analysis of the raw data, without accounting for the sample design, would lead to the overall results being too heavily influenced by states with fewer licensees.

For example, there were 409,971 RNs in California, out of which 946 responded. The California response per license rate was 946/409,971 = .002307. The overall response per license rate was 46476/4378273 = .010615. So the post-stratification weight for California was .010615/.002307 = 4.600.

Overall weights (pct_wgtC) that combined the AgeGender and post-stratification weights were created by multiplying the AgeGender and post-stratification weights for each individual to create an initial set of weights (labeled WgtCr), add-

ing the initial weights together (sum = 46,561.19), and slightly adjusting the weights so that they sum up to 46,476 (pct_wgtC = 46476*WgtCr/46561.19).

The overall weights simply adjust the distribution across states, age, and gender, but sum to the actual number of RNs in the subset of completed responses. They can be applied when analyzing relationships between variables without the effect of artificially increasing the degrees of freedom and thereby affecting significance tests. The AgeGender weights, post-stratification weights, and overall weights are summarized in Table A11.

TABLE A11

Response Bias RNs: Descriptive Statistics of Weights, Complete Responses Only

	n	Min	Max	Sum	Mean
AgeGender (AgeGenderWgtC)	46,476	0.516	1.647	46,476	1.000
Post-stratification (JurisdictionWgtC)	46,476	0.065	4.600	46,476	1.000
Combined (pct_wgtC)	46,476	0.036	7.562	46,476	1.000

Note. Combined (pct_wgtC) was used in reporting results.

Appendix B – Licensed Practical/Vocational Nurse Nonresponse Analyses and Sample Weighting

As with the registered nurses (RNs), a formal nonresponse bias analysis was conducted of the licensed practical/vocational nurse (LPN/VN) data following the close of the survey. The complete data file, or sample, included 120,793 LPN/VNs. Variables in the data file came from either the Nursys® database (i.e., the frame data) or responses to the survey (i.e., survey data). The variables used in the nonresponse analysis were from the frame and include state, date of birth, gender, ethnicity, original license date, and graduation date. The dependent variable in the analysis was whether or not the sampled LPN/VN completed the questionnaire.

Preliminary Analysis

Of the 120,793 LPN/VNs in the sample frame, 32,263 responded, for a response rate of 26.7% (Table B1). Tables B2 and B3 show the frequencies for the categorical variables. Table B4 shows the descriptive statistics for the continuous variables, while Table B5 shows the number of respondents who had complete data on gender, race, age, years since graduation, and years since initial licensure. These 37,343 LPN/VNs were the basis of the nonresponse analysis.

TABLE B1

Response Bias LPN/VN: Response Rate

	(*n* = 120,793)	Percentage
No	88,530	73.3%
Yes	32,263	26.7%

TABLE B2

Response Bias LPN/VN: Gender

		(*n* = 120,793)	Percentage	Valid Percent
Valid	Female	79,301	65.7%	92.6%
	Male	6,360	5.3%	7.4%
	Total	85,661	70.9%	100.0%
Missing	Restricted/unknown	2,827	2.3%	
	Missing	32,305	26.7%	
	Total	35,132	29.1%	

TABLE B3

Response Bias LPN/VN: Race/Ethnicity

		(*n* = 120,793)	Percentage	Valid Percent
Valid	White	28,699	23.8%	73.6%
	Black/African American	6,510	5.4%	16.7%
	Asian	480	0.4%	1.2%
	Hispanic	2,332	1.9%	6.0%
	Native American	383	0.3%	1.0%
	Pacific Islander	7	0.0%	0.0%
	Other	585	0.5%	1.5%
	Total	38,996	32.3%	100.0%
Missing	Restricted	10	0.0%	
	Unknown/blank	56,154	46.5%	
	Not supplied	1,457	1.2%	
	Missing	24,176	20.0%	
	Total	81,797	67.7%	

TABLE B4

Response Bias LPN/VN: Descriptive Statistics for Continuous Measures

	n	*M*	*SD*	Min	Max
Age in years	90,854	47.0	13.3	18	96
Number of years since graduation	83,952	16.5	13.4	0	69
Number of years since original licensure	96,075	14.8	12.9	0	64

TABLE B5

Response Bias LPN/VN: Case Has Complete Data for Nonresponse Analysis

	n	Percentage
No	83,450	69.1%
Yes	37,343	30.9%
Total	120,793	100.0%

Bivariate Analysis

Tables B6 and B7 show the bivariate relationships between the demographic variables from the sample frame and whether or not the respondent completed the survey. There were far fewer men in the database (6,360 compared to 79,301 women) and they were less likely to complete the survey (18.9% compared to 27.3% among women).

TABLE B6

Response Bias LPN/VN: Survey Completion Rate by Gender

		Complete Survey?	
	n	No	Yes
Female	79,301	72.7%	27.3%
Male	6,360	81.1%	18.9%
Total	85,661	73.3%	26.7%

Note. χ^2 (1, n = 85,661) = 211.6, p < .001.

From Table B7, nurses who identified as White were most likely to respond, with a response rate of 28.1%. Other Race and Pacific Islander nurses were least likely to respond, with response rates of 16.8% and 0.0%, respectively.

TABLE B7

Response Bias LPN/VN: Survey Completion Rate by Race/Ethnicity

		Complete Survey?	
Race/Ethnicity	*n*	No	Yes
White	28,699	71.9%	28.1%
African American	6,510	80.9%	19.1%
Asian	480	74.8%	25.2%
Hispanic	2,332	78.8%	21.2%
Native American	383	76.0%	24.0%
Pacific Islander	7	100.0%	0.0%
Other	585	83.2%	16.8%
Total	38,996	74.1%	25.9%

Note. χ^2 (6, n = 38,996) = 282.6, p < .001.

Table B8 displays the mean age of LPN/VNs, mean number of years since graduation, and mean number of years since original licensure by completion status. On average, those who completed the survey were 5.8 years older than the nonrespondents; graduated 5.2 years earlier than the nonrespondents; and obtained their original license 4.9 years earlier than the nonrespondents. All relationships were statistically significant.

TABLE B8

Response Bias LPN/VN: Differences in Mean Age, Years Since Graduation, and Years Since Licensure, by Survey Completion

Complete Survey?		Age in Years	Number of Years Since Graduation	Number of Years Since Original Licensure
No	*n*	66,791	61,820	70,566
	M	45.4	15.1	13.5
	SD	12.9	12.6	12.1
Yes	*n*	24,063	22,132	25,509
	M	51.2	20.3	18.4
	SD	13.5	14.8	14.4
Total	*n*	90,854	83,952	96,075
	M	47.0	16.5	14.8
	SD	13.3	13.4	12.9

Note. In all three analyses, *t-tests* show that the relationships were significant at the <.001 level.

Table B9 shows that having complete data on all demographic variables was related to completing the survey. The Cramer's V statistic of -0.013 suggests this difference was of small effect. Therefore, while demographic characteristics themselves were related to response propensity, the lack of information about these characteristics was for the most part not.

Missing data on demographic characteristics were largely a function of the jurisdiction in which the respondent worked. Data on gender were completely missing in nine jurisdictions and mostly missing (greater than 95% of LPN/VNs) in three. Data on race/ethnicity were completely missing in 11 jurisdictions and largely missing (90% of LPN/VNs or greater) in 24. Data on date of birth were completely missing in nine jurisdictions and mostly missing (greater than 95% of LPN/VNs) in two. In addition, response rates differed significantly by jurisdiction. The response rates ranged from a low of 9.3% in the Northern Mariana Islands to a high of 39.2% in Montana ($\chi^2(54, n = 120{,}793) = 1611.6, p < .001$).

TABLE B9

Response Bias LPN/VN: Survey Completion Rate by Status of Data

		Complete Survey?	
Status of Data	***n***	**No**	**Yes**
Incomplete	83,450	72.9%	27.1%
Complete	37,343	74.2%	25.8%
Total	120,793	73.3%	26.7%

Note. χ^2 (1, n = 120,793) = 22.4, p < .001.

Weights

For the LPN/VN survey, the gender (29.1% missing) and age (24.8% missing) categories were not too poorly populated and it was determined that a nonresponse adjustment for gender and age could be made. The large amount of missing race/ethnicity data (67.7% missing) made using that category impractical for nonresponse adjustment.

In order to create the combined age and gender (AgeGender) nonresponse weights (i.e., AgeGenderWgtC), the survey response rates for the age variable were compared at the 5-year age-group level and neighboring cells with similar response rates were collapsed. Upon completion of this process, six age-groups were created (18–49, 50–54, 55–59, 60–64, 65 or older, missing). These six age-groups were combined with the gender variable response categories (male, female, missing) to produce 18 AgeGender categories. The survey response rate for each age-gender category (# responding/# in sample frame) was calculated and used to create each category's weight as follows:

AgeGender Category Weight = Overall Survey Response Rate/AgeGender Category Survey Response Rate

An example of how this was calculated can be found in the RN nonresponse sample weighting section. When the AgeGender weights for each respondent are totaled up, the sum comes to 32,263, which was the same as the total number of respondents. Table B10 displays the weights for the 18 AgeGender categories.

TABLE B10

Response Bias LPN/VN: AgeGender Weights

Age-Group	Gender: Missing	Gender: Female	Gender: Male
18-49	1.520	1.354	1.801
50-54	1.079	0.922	1.272
55-59	0.842	0.751	1.068
60-64	0.796	0.690	0.960
65-older	0.719	0.600	0.761
Age missing	0.965	1.090	1.568

In a similar manner, post-stratification weights (i.e., JurisdictionWgtC) were constructed at the state level to adjust for differing sampling rates across states. However, these adjustments were made not by comparing the number of responses in a states' sample count, but rather by comparing the number of responses to the number of licensees in that state. An example of how these weights were calculated can be found in the RN nonresponse sample weighting section.

Overall weights (pct_wgtC) that combined the age-gender and post-stratification weights were created by multiplying the AgeGender and post-stratification weights for each individual to create an initial set of weights (labeled WgtCr), adding the initial weights together (sum = 33,097.18), and slightly adjusting the weights so that they sum up to 32,263 (pct_wgtC = 32263*WgtCr/33097.18).

The overall weights simply adjust the distribution across states, age, and gender, but sum to the actual number of LPN/VNs in the subset of completed responses. They can be applied when analyzing relationships between variables without the effect of artificially increasing the degrees of freedom and thereby affecting significance tests. The AgeGender weights, post-stratification weights, and overall weights are summarized in Table B11.

TABLE B11

Response Bias LPN/VN: Descriptive Statistics of Weights, Complete Responses Only

	n	Min	Max	Sum	Mean
AgeGender (AgeGenderWgtC)	32,263	0.600	1.807	32,263	1.000
Post-stratification (JurisdictionWgtC)	32,263	0.097	4.583	32,263	1.000
Combined (pct_wgtC)	32,263	0.057	7.558	32,263	1.000

Note. pct_wgtC was used in reporting results.

Appendix C – Listing of Tables

Appendix D – Survey Questionnaire

NCSBN
National Council of State Boards of Nursing

THE NATIONAL FORUM
OF STATE NURSING WORKFORCE CENTERS

NATIONAL
NURSING WORKFORCE SURVEY

Marking Instructions

Use a No. 2 pencil or blue or black ink pen only.
Do not use pens with ink that soaks through the paper.
Make solid marks that fill the oval completely.

Make no stray marks on this form
Do not tear or mutilate this form.

Correct Mark ✓ ✗ Incorrect Marks

Demographics

1. **What is your gender?** ○ Male ○ Female

2. **What is your race/ethnicity?** ***(Mark all that apply)***
   - ○ American Indian or Alaska Native
   - ○ Asian
   - ○ Black/African American
   - ○ Native Hawaiian or Other Pacific Islander
   - ○ White/Caucasian
   - ○ Hispanic/Latino
   - ○ Other

3. **In what year were you born?**

YEAR			
1	9		
		0	0
		1	1
		2	2
		3	3
		4	4
		5	5
		6	6
		7	7
		8	8
		9	9

4. **What type of nursing degree/credential qualified you for your first US nursing license?**
   - ○ Vocational/practical certificate-nursing
   - ○ Diploma-nursing
   - ○ Associate degree-nursing
   - ○ Baccalaureate degree-nursing
   - ○ Master's degree-nursing
   - ○ Doctoral degree-nursing (DNP)
   - ○ Doctoral degree-nursing (PhD)
   - ○ Doctoral degree-nursing other

5. **What is your highest level of education?**
   - ○ Vocational/practical certificate-nursing
   - ○ Diploma-nursing
   - ○ Associate degree-nursing
   - ○ Associate degree-other field
   - ○ Baccalaureate degree-nursing
   - ○ Baccalaureate degree-other field
   - ○ Master's degree-nursing
   - ○ Master's degree-other field
   - ○ Doctoral degree-nursing practice (DNP)
   - ○ Doctoral degree-nursing (PhD)
   - ○ Doctoral degree-nursing other
   - ○ Doctoral degree-other field

PageONE

SCANTRON. EliteView™ EM-291676-2:654321 HR06

DO NOT WRITE IN THIS AREA

License/Certification Information

6. What type of license do you currently hold? *(Mark all that apply)*

○ RN ○ LPN/VN ○ Advanced Practice RN license

7. Indicate whether you are credentialed in your state to practice as any of the following:

○ Nurse Practitioner ○ Certified Registered Nurse Anesthetist ○ Not licensed/certified as any of the above
○ Clinical Nurse Specialist ○ Certified Nurse Midwife

8. What year did you obtain your initial US licensure?

YEAR

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

9. In what country did you receive your entry-level education?

○ United States ○ Philipines ○ Other, please specify _____
○ Canada ○ India

10. In what country were you initially licensed as RN or LPN?

○ United States ○ Philipines ○ Other, please specify _____
○ Canada ○ India

11. Please indicate the states in which you hold an active license to practice as an RN or LPN/VN:

○ AK	○ IL	○ ND	○ TN
○ AL	○ IN	○ NE	○ TX
○ AR	○ KS	○ NH	○ UT
○ AZ	○ KY	○ NJ	○ VA
○ CA	○ LA	○ NM	○ VT
○ CO	○ MA	○ NV	○ WA
○ CT	○ MD	○ NY	○ WI
○ DC	○ ME	○ OH	○ WV
○ DE	○ MI	○ OK	○ WY
○ FL	○ MN	○ OR	○ **AS**
○ GA	○ MO	○ PA	○ **GU**
○ HI	○ MS	○ RI	○ **MP**
○ IA	○ MT	○ SC	○ **VI**
○ ID	○ NC	○ SD	

12. Please indicate the states in which you are currently practicing as an RN or LPN/VN:

○ AK	○ IL	○ ND	○ TN
○ AL	○ IN	○ NE	○ TX
○ AR	○ KS	○ NH	○ UT
○ AZ	○ KY	○ NJ	○ VA
○ CA	○ LA	○ NM	○ VT
○ CO	○ MA	○ NV	○ WA
○ CT	○ MD	○ NY	○ WI
○ DC	○ ME	○ OH	○ WV
○ DE	○ MI	○ OK	○ WY
○ FL	○ MN	○ OR	○ **AS**
○ GA	○ MO	○ PA	○ **GU**
○ HI	○ MS	○ RI	○ **MP**
○ IA	○ MT	○ SC	○ **VI**
○ ID	○ NC	○ SD	

Employment Information

13. What is your employment status? *(Mark all that apply)*

○ Actively employed in nursing full-time
○ Actively employed in nursing part-time
○ Actively employed in nursing per diem
○ 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
○ Working in nursing only as a volunteer
○ Unemployed, seeking work as a nurse
○ Unemployed, not seeking work as a nurse
○ Retired

Primary position: The position at which you work the most hours during your regular work year.

Secondary position: The position at which you work the second greatest number of hours during your regular work year.

Per diem: an arrangement wherein a nurse is employed directly on an as needed basis and usually has no benefits.

14. If unemployed, please indicate the reasons:

○ Taking care of home and family ○ School
○ Disabled ○ Difficulty in finding a nursing position
○ Inadequate Salary ○ Other, please specify _____

PageTWO

Please answer questions 15 – 31 only if you are actively employed in nursing, if you are not actively employed in nursing you have completed the survey.

15. In how many positions are you currently employed as a nurse? ○ 1 ○ 2 ○ 3 or more

16. How many hours do you work during a typical week in all your nursing positions?

HOURS

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

17. Please indicate if you work in any of these areas or specialty settings:

a.	Camp Nurse	○ Yes	○ No
b.	Correctional	○ Yes	○ No
c.	Developmental Disability	○ Yes	○ No
d.	Faith-based (ex: Parish Nurse)	○ Yes	○ No
e.	Forensic	○ Yes	○ No
f.	Holistic	○ Yes	○ No
g.	Military/uniform Services	○ Yes	○ No
h.	Telehealth	○ Yes	○ No
i.	Travel Nurse	○ Yes	○ No

18. Please indicate the state and zip code of your primary employer:

○ AK	○ IL	○ ND	○ TN
○ AL	○ IN	○ NE	○ TX
○ AR	○ KS	○ NH	○ UT
○ AZ	○ KY	○ NJ	○ VA
○ CA	○ LA	○ NM	○ VT
○ CO	○ MA	○ NV	○ WA
○ CT	○ MD	○ NY	○ WI
○ DC	○ ME	○ OH	○ WV
○ DE	○ MI	○ OK	○ WY
○ FL	○ MN	○ OR	○ **AS**
○ GA	○ MO	○ PA	○ **GU**
○ HI	○ MS	○ RI	○ **MP**
○ IA	○ MT	○ SC	○ **VI**
○ ID	○ NC	○ SD	

ZIP CODE

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

19. Please estimate your 2014 pre-tax annual earnings from your primary nursing position. Include overtime and bonuses, but exclude sign-on bonuses.

, , .00 per year

0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

20. Please identify the type of setting that most closely corresponds to your primary nursing practice position:

○ Academic Setting	○ Home Health	○ Policy/Planning/Regulatory/Licensing Agency
○ Ambulatory Care Setting	○ Hospital	○ Public Health
○ Assisted Living Facility	○ Insurance Claims/Benefits	○ School Health Service
○ Community Health	○ Nursing Home/Extended Care	○ Other
○ Correctional Facility	○ Occupational Health	

21. Please identify the position title that most closely corresponds to your primary nursing practice position:

○ Advanced Practice Nurse	○ Consultant	○ Nurse Manager	○ Other-Not Health Related
○ Case Manager	○ Nurse Executive	○ Nurse Researcher	○ Staff Nurse
○ Clinical Nurse Leader	○ Nurse Faculty	○ Other-Health Related	

22. Please identify the employment specialty that most closely corresponds to your primary nursing practice position:

○ Acute Care/Critical Care	○ Medical Surgical	○ Primary Care
○ Adult Health/Family Health	○ Neonatal	○ Psychiatric/Mental Health/Substance Abuse
○ Anesthesia	○ Nephrology	○ Public Health
○ Community	○ Neurology/Neurosurgical	○ Radiology
○ Emergency/Trauma	○ Occupational Health	○ Rehabilitation
○ Genetics	○ Oncology	○ School Health
○ Geriatric/Gerontology	○ Orthopedic	○ Urologic
○ Home Health	○ Palliative Care/Hospice	○ Women's Health
○ Informatics	○ Pediatrics	○ Other _____
○ Maternal-Child Health	○ Perioperative	

PageTHREE

23. Please indicate the state and zip code of your secondary employer:

○ AK	○ IL	○ ND	○ TN
○ AL	○ IN	○ NE	○ TX
○ AR	○ KS	○ NH	○ UT
○ AZ	○ KY	○ NJ	○ VA
○ CA	○ LA	○ NM	○ VT
○ CO	○ MA	○ NV	○ WA
○ CT	○ MD	○ NY	○ WI
○ DC	○ ME	○ OH	○ WV
○ DE	○ MI	○ OK	○ WY
○ FL	○ MN	○ OR	○ **AS**
○ GA	○ MO	○ PA	○ **GU**
○ HI	○ MS	○ RI	○ **MP**
○ IA	○ MT	○ SC	○ **VI**
○ ID	○ NC	○ SD	○ No Secondary Practice Position

ZIP CODE

24. Please estimate your 2014 pre-tax annual earnings from your secondary nursing position. Include overtime and bonuses, but exclude sign-on bonuses.

.00 per year

○ No Secondary Practice Position

25. Please identify the type of setting that most closely corresponds to your secondary nursing practice position:

○ No Secondary Practice Position	○ Community Health	○ Insurance Claims/Benefits	○ Public Health
○ Academic Setting	○ Correctional Facility	○ Nursing Home/Extended Care	○ School Health Service
○ Ambulatory Care Setting	○ Home Health	○ Occupational Health	○ Other
○ Assisted Living Facility	○ Hospital	○ Policy/Planning/Regulatory/Licensing Agency	

26. Please identify the position title that most closely corresponds to your secondary nursing practice position:

○ No Secondary Practice Position	○ Clinical Nurse Leader	○ Nurse Faculty	○ Other-Health Related
○ Advanced Practice Nurse	○ Consultant	○ Nurse Manager	○ Other-Not Health Related
○ Case Manager	○ Nurse Executive	○ Nurse Researcher	○ Staff Nurse

27. Please identify the employment specialty that most closely corresponds to your secondary nursing practice position:

○ No Secondary Practice Position	○ Maternal-Child Health	○ Perioperative
○ Acute Care/Critical Care	○ Medical Surgical	○ Primary Care
○ Adult Health/Family Health	○ Neonatal	○ Psychiatric/Mental Health/Substance Abuse
○ Anesthesia	○ Nephrology	○ Public Health
○ Community	○ Neurology/Neurosurgical	○ Radiology
○ Emergency/Trauma	○ Occupational Health	○ Rehabilitation
○ Genetics	○ Oncology	○ School Health
○ Geriatric/Gerontology	○ Orthopedic	○ Urologic
○ Home Health	○ Palliative Care/Hospice	○ Women's Health
○ Informatics	○ Pediatrics	○ Other _____

28. What percentage of the time do you estimate you provide nursing services or communicate with a patient or client located somewhere different from where you are located, via phone or electronically?

○ Never ○ 1 – 25% ○ 26 – 50% ○ 51 – 75% ○ 76 – 100%

29. When providing nursing services or communicating with a remote patient or client via phone or electronically, what percentage of the time is it across a state border?

○ Not applicable; I do not provide nursing services or communicate with remote patients or clients ○ Never ○ 1 – 25% ○ 26 – 50% ○ 51 – 75% ○ 76 – 100%

30. When providing nursing services or communicating with a remote patient or client via phone or electronically, what percentage of the time is it across a national border?

○ Not applicable; I do not provide nursing services or communicate with remote patients or clients ○ Never ○ 1 – 25% ○ 26 – 50% ○ 51 – 75% ○ 76 – 100%

31. Please describe the mode(s) of communication you use to provide nursing services or communicate with a remote patient or client: *(Mark all that apply)*

○ Not applicable; I do not provide nursing services or communicate with remote patients or clients

○ Electronic messaging (ex: text message, instant message)	○ Telephone	○ Other _____
○ Voice over internet protocol (VoIP) (Skype, FaceTime)	○ Email	
○ Virtual ICU (also known as: tele-ICU, remote ICU, eICU)	○ Video call	

PageFOUR

DO NOT WRITE IN THIS AREA