The 2017 National Nursing Workforce Survey

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Letters to the Editor

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The 2017 National Nursing Workforce Survey

Executive Summary

The purpose of this study is to provide the nation with the most accurate data available on the characteristics of the U.S. nursing workforce. Since 2013, the National Council of State Boards of Nursing (NCSBN) and The National Forum of State Nursing Workforce Centers (Forum) have partnered every 2 years to conduct this national sample survey using the Forum's Nurse Supply Minimum Data Set (MDS), a standardized survey tool designed to collect workforce data. These data will help answer some of the pressing questions asked by health care workforce researchers, policy makers, and leaders in nursing education and practice to assist in workforce planning and provide evidence for decisions impacting the future of nursing in America.

Previously, NCSBN and the Forum reported on the state of the workforce in *The 2015 National Nursing Workforce Survey*. The 2015 study estimated that in the United States and its territories, 3,852,881 individuals held active registered nurse (RN) licenses, and 906,471 held an active licensed practical nurse/licensed vocational nurse (LPN/LVN) license (Budden, Moulton, Harper, Brunell, & Smiley, 2016). Approximately 12% of these nurses held multiple licenses. The study identified an advanced practice registered nurse (APRN) workforce that appeared to be increasing in age in addition to an aging population of nurse educators. Eighty-one percent of respondents with RN licenses were actively employed in nursing and 77% of those with LPN/LVN licenses were actively employed in nursing. According to the 2015 study, hospitals were the most common employment setting for RNs (or 54% of respondents). However, the authors recognized that the work setting for both RNs and LPNs/LVNs was changing due to telehealth technologies and other factors. Demographically, the 2015 survey found that 19.5% of RN respondents and 32% of LPN/LVN respondents were from underrepresented racial and ethnic populations. The study also noted that minority populations were better represented in younger cohorts and among more recently licensed RNs. Data from this survey indicated that the median salary for males was higher than for females among both RNs and LPNs/LVNs (\$72,000 versus \$64,000 among RNs, and \$43,200 versus \$38,000 among LPNs/LVNs).

Selected Findings From the 2017 Workforce Study

Size of the RN and LPN/LVN Workforce

As of December 2017, the total number of active RN licenses held was 4,639,548 and active LPN/LVN licenses held was 975,988, representing an increase by 261,275 of RN licenses (6.0%) and a decrease by 52,432 of LPN/LVN licenses (-5.1%) when compared to 2015. After adjusting for nurses with multiple licenses, the 2017 numbers correspond to approximately 3,951,001 RN licensees and 920,743 LPN/LVN licensees.

Aging of the Workforce

The average age of RNs is 51, which is largely consistent with previous study findings (2015 and 2013). In 2015, 12.4% of the RN respondents were 65 or older compared to 14.6% in the current study, an increase of 2.2 percentage points, which indicates a slow but steady growth of RNs that may be heading for retirement. The average age of LPNs/LVNs was 52 in 2017, a year older than in 2015. The percentage of nurses 65 and older increased from 9.9% in 2015 to 13.2% in 2017, which represents twice as much of an increase in comparison to RNs.

Gender, Race, and Ethnic Diversity

The percentage of male RNs (9.1%) in the 2017 workforce increased by 1.1 and 2.5 percentage points, respectively, when compared with findings from the 2015 (8.0%) and 2013 study (6.6%). Approximately 5% of RNs indicated that they were of Hispanic or Latino origin. In the current study 19.2% of the RN respondents were minorities, which includes other and two or more races: Asian (7.5%), Black/African American (6.2%), other (2.9%), and two or more races (1.7%). The percentage of nurses who identify as Asian in the current study exceeds the 5.7% represented in the U.S. population; the percentage of nurses who identify as Black/African American falls below the 13.3% in the U.S. population (U.S. Census Bureau, 2017). The LPN/LVN workforce remains relatively unchanged in terms of gender diversity between 2015 and 2017. The percentage of males in the LPN/LVN workforce increased by less than half of a percentage point from 7.5% to 7.7% between the two studies. LPNs/LVNs are more racially and ethnically diverse than their RN counterparts. Approximately 29% of LPNs/LVNs were racial minorities with the largest reporting minority group being Black/African Americans (18.5%).

Education

The trend toward a higher percentage of respondents pursuing a BSN degree as their initial nursing education continued in 2017 with 41.8% of the RNs reporting the BSN as the degree that qualified them for their first US nursing license, which reflects a 2.8 percentage point increase when compared to 2015 (39.0%) and a 6.3 percentage point increase when compared to 2013 (35.5%). In terms of graduate education, the number of RNs with a Master's degree in nursing has increased from 13.8% in 2013 to 17.1% in 2017, an increase of 3.3 percentage points. Although small in terms of percentage, 1.1% of responding RNs reported having a Doctorate in Nursing Practice (DNP) as their highest level of nursing education, which is double the percent of nurses who reported having a DNP in 2015. By comparison, 83.2% of LPNs/LVNs indicated that their entry-level qualification for their first US nursing license was a vocational/practical certificate. Of those, more than three-quarters did not pursue a higher level of nursing education.

Employment and Salary

Nurses work settings are changing, as patient care is no longer confined to the walls of a health care facility. Hospitals were the primary employment setting for 55.7% of RNs, 54.4% in 2015, but less than the 56.5% reported in 2013. Ambulatory care setting was the second most frequently selected employment setting reported by 9.4% of RNs, followed by nursing home/extended care (4.8%), and home health (4.3%).

The median pre-tax annual earnings for RNs in the current study increased from \$60,000 in 2015 to \$63,000 in 2017, which is lower than the median salary of \$70,000 for RNs reported by the Bureau of Labor Statistics Occupational Outlook Handbook (2018). In the current study, responding RNs making between \$80,000 and \$100,000 increased by 1.6 percentage points and those making more than \$100,000 increased by nearly 4 percentage points.

Nursing home/extended care was the most common work setting for LPNs/LVNs (31.7%), followed by home health settings (14.0%), and hospitals (9.6%). These findings are consistent with results from the 2015 survey.

The median pre-tax annual earnings for LPNs/LVNs increased from \$38,000 in 2015 to \$40,000 in 2017. However, it is also lower than the median pay of \$45,030 reported by the Bureau of Labor Statistics (2018).

Telehealth

Over half (54.1%) of responding RNs provided nurse services using telehealth technologies. In the current study, 45.7% provided these services across a state border compared to 39.4% in 2015, an increase of 6.3 percentage points, and 11.1% reported providing remote services to patients or clients across national borders, which is an increase of 3.4 percentage points when compared to 2015 (7.7%).

LPNs/LVNs provided nursing services using telehealth technologies in similar proportions to RNs (54.2%). Of those providing these services, 43.9% provided services across state borders, an increase of 10.1 percentage points from 2015.

Conclusion

In conclusion, ongoing monitoring and evaluation of the nursing workforce are critical, as the nursing workforce will continue to undergo significant changes in the next few years. This survey represents the nursing workforce of *today* with the expectation that the workforce of *tomorrow* will be slightly younger, highly educated, with higher numbers working in the community providing primary health care and using technology and telehealth as a means to deliver health care. As the United States undergoes health system transformations, nurses, as the largest segment of the health care workforce and members of the interprofessional health care team, are in a unique position to contribute to and, in many instances, lead the transformation. This effort will require a nursing workforce with an enhanced set of knowledge and skills in relation to population health and wellness, multidisciplinary care coordination, technological advances in health care delivery, evidence-based data analytics, and quality improvement. All these elements create a picture of what will constitute the nursing workforce of the *future*.

Introduction

The National Council of State Boards of Nursing (NCSBN) and The Forum of State Nursing Workforce Centers (Forum) collaborated on the third biennial national survey of registered nurses (RNs) and licensed practical nurses/licensed vocational nurses (LPNs/LVNs) to provide an in-depth study of the national nursing workforce. The survey is designed to collect important information on the supply of RNs and LPNs/LVNs in the United States. Knowledge of the supply of nurses can be used to predict potential shortages and assist in the allocation of resources, program development, and recruitment efforts in both the health care system and education sectors. Having an adequate supply of nurses in the workforce is essential to providing safe and effective health care to the citizens of the United States.

This study presents a national, randomized survey of 148,684 licensed RNs and 151,928 LPNs/LVNs. Data were collected between August 28, 2017, and January 15, 2018, from the 48,704 RN responders (32.8%) and the 40,272 LPN/LVN responders (26.5%). The data provides the most recent and detailed information on the current demographics, characteristics, educational attainment, employment, and trends of the U.S. RN and LPN/LVN nursing workforce as of 2017. To illustrate trends in workforce supply, the current study's results were compared to some national nursing workforce studies that based their findings on data collected years prior to this study, as well as studies in which different data collection methods were used. Thus, the comparisons of statistics from various studies presented should be interpreted with the above considerations in mind.

Method

Sample

All RNs and LPNs/LVNs with an active license 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/LVN licensees, with the exception of Hawaii, Louisiana (LPN), and Oklahoma licensees because at the time of the study, these states did not participate in Nursys. Additionally, Alabama, Kansas, Massachusetts, Pennsylvania, and Washington restrict the use of addresses in Nursys. These states were contacted to obtain licensee lists and addresses directly. Licensee lists and addresses were also obtained directly from the following BONs: California (RN and LPN/LVN), Michigan, New Jersey, and New York. Names and addresses of nurses living in Utah were obtained from a national mailing list. American Samoa and Missouri voluntarily chose not to participate in this survey.

As of June 2017, the total number of active RN licenses held was 4,639,548 and active LPN/LVN licenses held was 975,988. These numbers do not include American Samoa and Missouri but do include the approximately 17% of individuals with multiple licenses. Separate RN and LPN/LVN samples stratified by state were randomly selected from the RN licensees and LPN/LVN licensees. Surveys were mailed to 153,920 RNs and 158,502 LPNs/LVNs. Table 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 and the number of surveys that needed to be received from each jurisdiction in order to construct a 95% confidence of plus or minus 3% error. Regardless of jurisdiction size, this calculated out to be approximately 1,000 nurses per 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 2015 survey administration were used as estimates. For example, for Alaska in 2015 there was a 36% response rate for the RN survey. Given this estimated rate, 2,684 RNs in Alaska were selected to be sent a survey in order to receive the target of 977 surveys. Actual response from Alaska RNs to the current survey (i.e., the number of responses returned) was 966, very close to the target of 977.

TABLE 1
Number of Active RN Licenses

Jurisdiction	Number of Active RN Licenses	Estimated Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliverable	Number Received	Number of Responses	Total Response Rate
AK	13,829	977	36.4%	2,684	49	2,635	966	36.7%
AL	79,610	1,051	28.1%	3,740	30	3,710	1,010	27.2%
AR	41,636	1,040	30.1%	3,455	67	3,388	967	28.5%
AZ	87,420	1,054	32.8%	3,213	231	2,982	966	32.4%
CA	427,892	1,064	32.1%	3,315	74	3,241	1,020	31.5%
CO	75,419	1,052	34.4%	3,058	253	2,805	1,026	36.6%

(continued)

Jurisdiction	Number of Active RN Licenses	Estimated Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliverable	Number Received	Number of Responses	Total Response Rate
CT	64,882	1,050	35.9%	2,925	76	2,849	937	32.9%
DC	26,508	1,020	29.0%	3,517	126	3,391	960	28.3%
DE	18,111	1,010	37.7%	2,679	106	2,573	818	31.8%
FL	316,640	1,063	27.3%	3,894	89	3,805	993	26.1%
GA	132,949	1,058	30.0%	3,527	111	3,416	1,018	29.8%
HI	27,916	1,048	36.6%	2,863	173	2,690	882	32.8%
IA	54,415	1,046	39.4%	2,655	70	2,585	992	38.4%
ID	21,362	1,017	41.4%	2,457	113	2,344	929	39.6%
IL	195,399	1,061	31.2%	3,401	88	3,313	1,069	32.3%
IN	111,129	1,057	37.7%	2,804	109	2,695	902	33.5%
KS	57,969	1,047	36.0%	2,908	60	2,848	972	34.1%
KY	69,753	1,051	30.8%	3,412	34	3,378	1,002	29.7%
LA	65,914	1,050	28.4%	3,697	59	3,638	1,096	30.1%
MA	134,405	1,058	34.0%	3,112	58	3,054	983	32.2%
MD	81,363	1,053	31.4%	3,354	114	3,240	1,080	33.3%
ME	25,026	1,022	36.2%	2,823	60	2,763	1,066	38.6%
MI	149,864	1,060	39.5%	2,684	57	2,627	1,027	39.1%
MN	109,456	1,056	42.3%	2,496	51	2,445	978	40.0%
MS	48,907	1,043	25.2%	4,139	91	4,048	1,073	26.5%
MT	16,285	1,003	44.3%	2,264	127	2,137	989	46.3%
NC	134,738	1,058	36.3%	2,915	92	2,823	908	32.2%
ND	14,039	991	41.8%	2,371	71	2,300	1,005	43.7%
NE	29,930	1,027	42.5%	2,416	258	2,158	792	36.7%
NH	22,777	1,018	37.5%	2,715	95	2,620	928	35.4%
NJ	124,991	1,058	30.5%	3,469	47	3,422	1,092	31.9%
NM	28,422	1,027	33.1%	3,103	142	2,961	1,035	35.0%
NV	38,054	1,036	30.9%	3,353	165	3,188	1,016	31.9%
NY	322,755	1,063	35.4%	3,003	294	2,709	707	26.1%
OH	204,281	1,062	37.1%	2,863	102	2,761	895	32.4%
OK	55,506	1,046	30.5%	3,430	69	3,361	935	27.8%
OR	60,230	1,048	37.4%	2,802	104	2,698	1,075	39.8%
PA	220,583	1,062	39.8%	2,668	38	2,630	937	35.6%
RI	20,529	1,013	33.9%	2,988	113	2,875	968	33.7%
SC	69,799	1,050	32.2%	3,261	95	3,166	940	29.7%
SD	18,162	1,006	42.4%	2,373	50	2,323	940	40.5%
TN	100,817	1,056	31.7%	3,331	94	3,237	891	27.5%
TX	314,920	1,063	27.6%	3,851	131	3,720	906	24.4%
UT	33,309	1,033	35.3%	2,926	0	2,926	736	25.2%
VA	104,667	1,056	31.6%	3,342	77	3,265	1,025	31.4%
VT	14,064	996	38.0%	2,621	25	2,596	973	37.5%
WA	96,664	1,055	38.5%	2,740	144	2,596	1,019	39.3%
WI	102,908	1,055	46.8%	2,254	32	2,222	1,022	46.0%
WV	32,669	1,033	30.5%	3,387	56	3,331	888	26.7%
WY	15,579	990	40.8%	2,426	108	2,318	980	42.3%
Virgin Islands	1,599	621	25.7%	1,026	135	891	157	17.6%
Guam	1,200	512	23.9%	745	126	619	143	23.1%
Northern Mariana Islands	2,297	640	20.6%	465	97	368	70	19.0%
TOTAL	4,639,548	53,786	34.3%	153,920	5,236	148,684	48,704	32.8%

TABLE 2

Number of Active LPN/LVN Licenses

Jurisdiction	Number of Active LPN/LVN Licenses	Estimated Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliverable	Number Received	Number of Responses	Total Response Rate
AK	865	446	30.7%	636	39	597	148	24.8%
AL	18,486	1,005	28.6%	3,514	125	3,389	926	27.3%
AR	15,287	998	28.0%	3,564	98	3,466	875	25.2%
AZ	10,362	968	24.2%	4,000	403	3,597	954	26.5%
CA	100,129	1,056	22.5%	4,693	106	4,587	1,079	23.5%
CO	8,712	940	25.4%	3,701	390	3,311	1,018	30.7%
CT	12,956	987	23.0%	4,291	256	4,035	870	21.6%
DC	2,205	761	22.8%	1,827	33	1,794	357	19.9%
DE	3,050	774	27.6%	2,693	145	2,548	594	23.3%
FL	64,237	1,051	23.9%	4,397	208	4,189	834	19.9%
GA	30,813	1,035	24.1%	4,295	105	4,190	947	22.6%
HI	3,004	978	30.7%	2,569	189	2,380	713	30.0%
IA	10,517	972	32.0%	3,038	98	2,940	931	31.7%
ID	3,747	818	32.7%	2,502	86	2,416	759	31.4%
IL	26,820	1,030	25.0%	4,120	79	4,041	1,101	27.2%
IN	25,385	1,021	27.5%	3,713	97	3,616	905	25.0%
KS	10,639	969	32.3%	3,000	141	2,859	817	28.6%
KY	13,835	992	25.4%	3,906	85	3,821	931	24.4%
LA	23,160	1,020	22.7%	4,493	69	4,424	858	19.4%
MA	20,488	1,018	25.9%	3,931	135	3,796	896	23.6%
MD	12,297	983	23.2%	4,237	211	4,026	949	23.6%
ME	2,242	730	33.4%	2,090	67	2,023	728	36.0%
MI	24,237	1,024	33.9%	3,021	82	2,939	904	30.8%
MN	22,297	1,018	38.3%	2,658	62	2,596	1,043	40.2%
MS	14,222	989	20.9%	4,732	258	4,474	1,041	23.3%
MT	2,663	791	42.0%	1,883	114	1,769	770	43.5%
NC	22,605	1,018	29.8%	3,416	158	3,258	987	30.3%
ND	3,161	805	39.2%	2,054	79	1,975	814	41.2%
NE	5,842	918	35.6%	2,579	109	2,470	882	35.7%
NH	3,130	796	29.8%	1,379	76	1,303	347	26.6%
NJ	23,435	1,021	25.5%	4,004	82	3,922	912	23.3%
NM	2,758	768	29.0%	2,648	180	2,468	727	29.5%
NV	3,905	832	27.5%	3,025	252	2,773	741	26.7%
NY	76,928	1,052	23.9%	1,903	80	1,823	356	19.5%
OH	54,720	1,046	28.8%	3,632	163	3,469	1,017	29.3%
OK	16,808	1,012	26.1%	3,877	193	3,684	790	21.4%
OR	5,381	884	29.0%	3,048	151	2,897	860	29.7%
PA	53,989	1,045	34.9%	2,994	68	2,926	894	30.6%
RI	2,008	691	27.4%	1,873	96	1,777	480	27.0%
SC	12,682	980	27.2%	3,603	155	3,448	856	24.8%
SD	2,617	753	35.8%	2,103	62	2,041	732	35.9%
TN	30,216	1,031	25.3%	4,075	100	3,975	926	23.3%
TX	105,655	1,056	23.7%	4,456	210	4,246	900	21.2%
UT	2,834	769	29.3%	2,625	0	2,625	553	21.1%
VA	27,745	1,028	22.6%	4,549	157	4,392	1,003	22.8%
VT	2,379	699	31.2%	1,868	60	1,808	471	26.1%
WA	11,513	978	30.8%	3,175	269	2,906	836	28.8%
WI	13,166	999	42.7%	2,340	23	2,317	921	39.7%

(continued)

Jurisdiction	Number of Active LPN/LVN Licenses	Estimated Sample: 95% Confidence, 3% Error	Estimated Total Response Rate	Number of Surveys Mailed	Undeliverable	Number Received	Number of Responses	Total Response Rate
WV	7,968	942	21.0%	4,486	76	4,410	964	21.9%
WY	1,465	587	35.6%	960	53	907	307	33.8%
Virgin Islands	170	141	13.1%	132	13	119	17	14.3%
Guam	56	146	31.1%	154	25	129	23	17.8%
Northern Mariana Islands	197	54	10.5%	40	3	37	8	21.6%
TOTAL	975,988	46,425	28.0%	158,502	6,574	151,928	40,272	26.5%

Survey Instrument and Materials

NCSBN and the Forum currently use the Nurse Supply Minimum Data Set (MDS), which was approved in 2009 after an intensive process of consensus-building and data compilation, to collect data on the nursing workforce at the state level. Because of the evolution and transformation of health care and nursing that have taken place since 2009, in 2015 the Forum made the decision to revisit the Supply MDS. Throughout 2015, the Forum's Research Committee undertook the task of reviewing the Supply MDS to ensure that the elements included were still relevant. This review included an assessment of items that were currently being collected by states and national organizations in their supply data collection efforts. The revised elements of this assessment were subject to review by members of the research committee as well as review and approval of all Forum member executive directors. Additionally, the Forum solicited comment on the proposed changes to the Supply MDS from national organizations and health care workforce researchers. Feedback received was incorporated into the updated version of the Supply MDS, which was ratified by the Forum in 2016.

Data were collected between August 28, 2017, and January 15, 2018. The survey was a four-page Scantron® fillable document with 31 questions. Data elements from the latest revision of the Forum's Supply MDS were incorporated, resulting in the following changes to the survey between the 2015 and 2017 waves of data collection:

- Ethnicity was asked separately from race
- Highest level of nursing education and highest level of non-nursing education were asked separately
- Response options for employment status, employment setting, and employment specialty were added, deleted, or revised.

Procedure

Western Institutional Review Board granted approval for the current study. 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 identifier was used for the online survey option. Electronic versions of the data were kept on department-secured servers through the end of the project. NCSBN's research staff, three key members of the Forum, and key personnel at Scantron had initial access to the identifiable data. Scantron no longer has access to the identifiable data.

Once materials were developed and the sampling file was complete, surveys were distributed over a 20-week period that included the following steps:

- Week 1: An announcement letter was sent to all nurses selected to participate (except for those in Utah, whose sampling process was delayed). The letter included a URL and access code to take the survey online.
- Week 2: Nurses with email addresses were sent a link to take the survey online. For nurses without email addresses, a cover letter and paper survey were mailed via first class U.S. mail.
- Week 3: Nurses with email addresses were sent a reminder to take the survey online.
- Week 4: Nurses with email addresses were sent a second reminder to take the survey.
- Week 5: For nurses who had not responded, a cover letter and paper survey were mailed via first class U.S. mail.
- Week 7: Because the sampling process was delayed in Utah, as a supplemental mailing, nurses in this state were mailed a cover letter via first class U.S. mail, which included a URL and access code and a quick response code to take the survey online.
- Week 8: For nurses who still had not responded, an additional cover letter and paper survey were mailed via first class U.S. mail. This mailing included the nurses in Utah.
- Week 13: For nurses in Utah who still had not responded, an additional cover letter and paper survey were mailed via first class U.S. mail.
- Week 20: Deadline for receipt of all surveys.

Once the survey was closed, the final data file was compiled separately for RNs and LPNs/LVNs.

Analysis

At the close of the survey, 48,704 of 148,684 successfully delivered RN surveys were returned, for a response rate of 32.8%; 40,272 of 151,928 successfully delivered LPN/LVN surveys were returned, for a response rate of 26.5%. A formal nonresponse bias analysis was conducted immediately following the close of the survey. An analysis of basic demographic data (i.e., gender, age, and race/ethnicity) for all RN licensees sampled from the Nursys database was used to compare survey respondents to survey nonrespondents. Results revealed the following groups of nurses may have been slightly overrepresented in both the RN and LPN/LVN samples: White/Caucasian, female, and age 50 or older. Because of missing or incomplete data on race/ethnicity, only gender and age were used to make nonresponse weighting adjustments. Additionally, since 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. A description of this process can be found in Appendices A and B.

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 for 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 is explicitly stated. The data for Utah nurses was sampled from a file of nurses living in Utah. This differs from the data collected for the rest of the jurisdictions, which were sampled from files of nurses licensed in those jurisdictions. Many tables include bar graphs to help you easily visualize and comprehend the data presented.

Population Estimate

For each question on the survey, frequencies are shown that reflect the nonresponse weighting adjustments. For some of the questions, an additional set of frequencies are shown that display the data scaled up to reflect estimates of the nursing population in the subgroup identified. For example, the 354,449 males reported in the 2017 column of Table 3 reflect the number of male respondents adjusted to the population level of number of RNs after the nonresponse weighting adjustments were made to the survey results and after adjusting the population number to account for nurses having licenses in multiple states.

The adjustments for multiple licenses were derived from data in the Nursys database in February 2018. At that time, the database contained 4,726,967 RN licenses, which corresponded to 4,025,446 unique RNs. This produced an RN adjustment factor of $4,025,446/4,726,967 = 0.851592$, which when applied to the 4,639,548 licenses in the RN sample frame (see Table 1) produced an estimate of 3,951,001 unique RNs in 2017.

For LPNs/LVNs, the February 2018 database contained 971,386 licenses, which corresponded to 920,013 unique LPNs/LVNs. This produced an LPN/LVN adjustment factor of $920,013/971,386 = 0.947114$, which when applied to the 975,988 licenses in the LPN/LVN sample frame (see Table 2) produced an estimate of 920,743 unique LPNs/LVNs in 2017.

Registered Nurse Results

Gender

While the nursing workforce continues to be predominately female (90.9%), the proportion of respondents who were male increased 2.5 percentage points from 2013 to 2017. See Table 3.

TABLE 3

Gender Distribution of Nurses—RN

Weighted Sample Values						
	2013 (n = 40,364.5)		2015 (n = 43,330.9)		2017 (n = 48,084.9)	
	n	Percent	n	Percent	n	Percent
Male	2,678.9	6.6%	3,459.6	8.0%	4,369.3	9.1%
Female	37,685.6	93.4%	39,871.4	92.0%	43,715.5	90.9%

Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
Male	221,416	6.6%	277,542	8.0%	354,449	9.1%
Female	3,114,767	93.4%	3,198,650	92.0%	3,546,320	90.9%

Race/Ethnicity

Nearly 81% of responding RNs were White/Caucasian. An additional 7.5% identified as Asian, 6.2% identified as Black/African American, 2.9% identified as other, and 1.7% identified as two or more races. See Table 4.

One of the changes to the 2017 survey included the modification of the race and ethnicity items. Previously, race and ethnicity categories were listed in one question. The question was modified, so that ethnicity and race are now two separate questions. Respondents were first asked whether they were of Hispanic or Latino origin and then asked to identify their race. Anyone who selected more than one race category was recoded into the two or more races category. RNs indicating that they were of Hispanic or Latino origin increased by 1.9 percentage points between 2013 and 2017. See Table 5.

TABLE 4

Race/Ethnicity—RN

Weighted Sample Values				
	2015		2017	
	(n = 45,989.3)	percent	(n = 47,966.3)	percent
American Indian or Alaska Native	198.5	0.4%	176.0	0.4%
Asian	3,053.0	6.6%	3,605.6	7.5%
Black/ African American	2,549.9	5.5%	2,995.9	6.2%
Native Hawaiian or other Pacific Islander	171.8	0.4%	226.3	0.5%
White/Caucasian	37,003.0	80.5%	38,766.1	80.8%
Other	390.8	0.8%	1,367.8	2.9%
Two or more races	968.4	2.1%	828.5	1.7%

Estimated Population Values				
	2015		2017	
	freq	percent	freq	percent
American Indian or Alaska Native	13,618	0.4%	14,276	0.4%
Asian	209,484	6.6%	292,497	7.5%
Black/ African American	174,965	5.5%	243,032	6.2%
Native Hawaiian or other Pacific Islander	11,787	0.4%	18,362	0.5%

(continued)

Race/Ethnicity—RN *(continued)*

Estimated Population Values				
	2015		2017	
	freq	percent	freq	percent
White/Caucasian	2,539,013	80.5%	3,144,812	80.8%
Other	26,815	0.8%	110,960	2.9%
Two or more races	77,687	<0.1%	67,214	1.7%

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

TABLE 5

Ethnicity of Hispanic or Latino Origin—RN

Weighted Sample Values						
	2013 (<i>n</i> = 41,876.0)		2015 (<i>n</i> = 45,989.3)		2017 (<i>n</i> = 47,965.6)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Hispanic or Latino origin	1,406.6	3.4%	1,654.0	3.6%	2,528.1	5.3%
Not of Hispanic or Latino origin	40,469.5	96.6%	44,335.3	96.4%	45,324.5	94.7%

Estimated Population Values						
	2013 (<i>n</i> = 41,876.0)		2015 (<i>n</i> = 45,989.3)		2017 (<i>n</i> = 47,965.6)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Hispanic or Latino origin	116,257	3.4%	132,692	3.6%	205,086	5.3%
Not of Hispanic or Latino origin	3,344,857	96.6%	3,556,764	96.4%	3,676,844	94.7%

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

Race/ethnicity by gender

Race/ethnicity groups with the highest percent of males are Hispanic/Latino (15.9%), Asian (15.7%), and Native Hawaiian or other Pacific Islander groups (15.2%). These groups had a substantially higher percent of males than the overall average (9.1%). See Table 6.

TABLE 6

Race/Ethnicity by Gender—RN

Weighted Sample Values			
	Male	Female	<i>n</i>
American Indian or Alaska Native	22.6	136.5	159.1
	14.2%	85.8%	
Asian	560.4	3,001.2	3,561.6
	15.7%	84.3%	
Black/African American	241.3	2,683.7	2,925.0
	8.2%	91.8%	
Native Hawaiian or other Pacific Islander	30.0	167.0	197.0
	15.2%	84.8%	
White/Caucasian	2,915.3	34,219.6	37,134.9
	7.9%	92.1%	
Hispanic/Latino of any race	400.3	2,120.1	2,520.4
	15.9%	84.1%	

(continued)

Weighted Sample Values			
	Male	Female	<i>n</i>
	85.6	563.9	649.6
Other	13.2%	86.8%	
	91.3	618.1	709.4
Two or more races	12.9%	87.1%	
	4,346.8	43,510.2	47,857.0
Total	9.1%	90.9%	

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

Age

In 2017, the median age of RN respondents was 53 years. This is unchanged from the median age of RN respondents in 2015, which was also 53 years, and only a year older than the median age of 52 from 2013.

As shown in Table 7, 50.9% of respondents were age 50 or older, which is consistent with the results from 2015 when 50% of respondents were age 50 or older. There was a 2.2 percentage point increase between 2015 and 2017 for respondents reporting that they were age 65 or older.

TABLE 7

Age Distribution—RN

Weighted Sample Values						
2013 (<i>n</i> = 34,793.9)			2015 (<i>n</i> = 41,258.6)		2017 (<i>n</i> = 47,527.3)	
Age	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
<30	2,997.9	8.6%	3,905.2	9.5%	4,594.5	9.7%
30-34	2,615.4	7.5%	4,098.0	9.9%	4,762.8	10.0%
35-39	2,784.0	8.0%	3,928.1	9.5%	4,390.6	9.2%
40-44	3,088.6	8.9%	4,200.7	10.2%	4,356.7	9.2%
45-49	3,379.3	9.7%	4,398.2	10.7%	5,250.7	11.1%
50-54	4,652.6	13.4%	4,724.8	11.5%	4,914.9	10.3%
55-59	5,887.7	16.9%	5,622.4	13.6%	5,834.4	12.3%
60-64	4,570.1	13.1%	5,254.9	12.7%	6,489.8	13.7%
≥ 65	4,818.4	13.9%	5,126.3	12.4%	6,932.9	14.6%

Estimated Population Values						
2013			2015		2017	
Age	Freq	Percent	Freq	Percent	Freq	Percent
<30	247,778	8.6%	313,291	9.5%	372,716	9.7%
30-34	216,164	7.5%	328,759	9.9%	386,374	10.0%
35-39	230,098	8.0%	315,127	9.5%	356,175	9.2%
40-44	255,281	8.9%	337,000	10.2%	353,430	9.2%
45-49	279,305	9.7%	352,843	10.7%	425,953	11.1%
50-54	384,543	13.4%	379,041	11.5%	398,712	10.3%
55-59	486,625	16.9%	451,051	13.6%	473,303	12.3%
60-64	377,724	13.1%	421,574	12.7%	526,468	13.7%
≥ 65	398,247	13.9%	411,256	12.4%	562,414	14.6%

(continued)

Age Distribution—RN (continued)

Age by gender

Among older age-groups (ages 50+), women comprise a much higher proportion of the population than younger age-groups (ages 30-49). See Table 8.

TABLE 8

Age Distribution by Gender—RN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	<i>n</i>
Male	387.4	540.9	413.4	471.7	704.7	401.6	454.0	493.1	407.0	4,273.9
	9.1%	12.7%	9.7%	11.0%	16.5%	9.4%	10.6%	11.5%	9.5%	
Female	4,165.1	4,198.4	3,956.7	3,857.4	4,504.2	4,444.4	5,325.3	5,922.5	6,433.8	42,807.9
	9.7%	9.8%	9.2%	9.0%	10.5%	10.4%	12.4%	13.8%	15.0%	
Total	4,552.5	4,739.3	4,370.1	4,329.1	5,208.9	4,846.0	5,779.3	6,415.6	6,840.9	47,081.8
	9.7%	10.1%	9.3%	9.2%	11.1%	10.3%	12.3%	13.6%	14.5%	

Age by race/ethnicity

The proportion of Hispanic/Latinos in the RN workforce has become progressively larger as new nurses have entered the workforce. Among those RNs 65 and older, only 7.3% are Hispanic/Latino compared to 13.9% of those under 30. This indicates an increase in the overall diversity of the nursing population. See Table 9.

TABLE 9

Age Distribution by Race/Ethnicity—RN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	<i>n</i>
American Indian or Alaska Native	12.1	8.8	15.1	16.2	20.2	15.6	17.7	24.0	25.9	155.6
	7.8%	5.7%	9.7%	10.4%	13.0%	10.0%	11.4%	15.4%	16.6%	
Asian	385.5	443.3	339.2	442.2	626.9	274.6	308.7	410.0	292.5	3,522.9
	10.9%	12.6%	9.6%	12.6%	17.8%	7.8%	8.8%	11.6%	8.3%	

(continued)

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	<i>n</i>
Black/African American	184.1	256.7	373.2	361.6	418.8	348.8	290.4	252.7	384.5	2,870.9
	6.4%	8.9%	13.0%	12.6%	14.6%	12.1%	10.1%	8.8%	13.4%	
Native Hawaiian or other Pacific Islander	13.6	46.4	12.6	20.8	19.0	22.3	18.4	23.0	18.4	194.5
	7.0%	23.9%	6.5%	10.7%	9.8%	11.5%	9.5%	11.8%	9.5%	
White/Caucasian	3,468.3	3,484.1	3,153.9	3,086.9	3,657.7	3,815.9	4,775.3	5,364.1	5,746.4	36,552.6
	9.5%	9.5%	8.6%	8.4%	10.0%	10.4%	13.1%	14.7%	15.7%	
Hispanic/Latino of any race	343.0	345.9	322.1	301.4	289.8	243.6	237.3	200.1	179.4	2,462.6
	13.9%	14.0%	13.1%	12.2%	11.8%	9.9%	9.6%	8.1%	7.3%	
Other	34.3	37.8	77.4	51.4	68.1	63.1	60.9	107.7	128.7	629.5
	5.4%	6.0%	12.3%	8.2%	10.8%	10.0%	9.7%	17.1%	20.4%	
Two or more races	105.4	117.6	75.2	49.5	96.9	64.7	78.8	46.4	61.7	696.2
	15.1%	16.9%	10.8%	7.1%	13.9%	9.3%	11.3%	6.7%	8.9%	
Total	4,546.2	4,740.7	4,368.7	4,329.9	5,197.5	4,848.5	5,787.5	6,428.2	6,837.5	47,084.8
	9.7%	10.1%	9.3%	9.2%	11.0%	10.3%	12.3%	13.7%	14.5%	

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

Education

Type of nursing degree or credential for first U.S. nursing license

The percentage of nurses reporting the baccalaureate as the nursing degree that qualified them for their first U.S. nursing license increased by 6.3 percentage points between 2013 and 2017. The percent of respondents who initially received a diploma or associate degree decreased by 7.2 percentage points. See Table 10.

TABLE 10

Type of Nursing Degree or Credential for First U.S. Nursing License—RN

Weighted Sample Values						
	2013 (<i>n</i> = 41,792.7)		2015 (<i>n</i> = 45,818.9)		2017 (<i>n</i> = 47,650.0)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Vocational/practical certificate	1,993.8	4.7%	2,442.1	5.3%	2,850.6	6.0%
Diploma	7,364.6	17.4%	6,539.3	14.3%	5,708.1	12.0%
Associate degree	16,152.0	38.2%	17,625.9	38.5%	17,332.5	36.4%
Baccalaureate degree	15,019.5	35.5%	17,853.4	39.0%	19,922.7	41.8%
Master's degree	1,218.0	2.9%	1,297.9	2.8%	1,836.0	3.9%

Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
Vocational/practical certificate	164,793	4.7%	195,916	5.3%	231,247	6.0%
Diploma	608,692	17.4%	524,607	14.3%	463,060	12.0%
Associate degree	1,334,987	38.2%	1,414,020	38.5%	1,406,062	36.4%
Baccalaureate degree	1,241,379	35.5%	1,432,271	39.0%	1,616,186	41.8%
Master's degree	100,673	2.9%	104,121	2.8%	148,942	3.9%

(continued)

Type of Nursing Degree or Credential for First U.S. Nursing License—RN (continued)

Type of nursing degree or credential for first U.S. nursing license by age. Two degrees are more associated with older RNs: diploma (almost 40% age 65 and over) and associate degree (12.3% age 65 and over). Increasingly, a baccalaureate is more common in younger age-groups as the educational qualifier for the nurse's initial licensure (15.6% age < 30). This indicates that the workforce is becoming increasingly educated. See Table 11.

TABLE 11

Type of Nursing Degree or Credential for First U.S. Nursing License by Age—RN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	n
Vocational/practical certificate	90.6	226.7	245.2	244.7	327.9	309.7	420.0	437.2	510.2	2,812.4
	3.2%	8.1%	8.7%	8.7%	11.7%	11.0%	14.9%	15.5%	18.1%	
Diploma	79.9	113.0	194.4	176.0	316.0	520.7	745.4	1,200.3	2,201.7	5,547.5
	1.4%	2.0%	3.5%	3.2%	5.7%	9.4%	13.4%	21.6%	39.7%	
Associate degree	1,255.3	1,546.7	1,688.0	1,770.9	2,102.3	1,923.5	2,228.4	2,398.4	2,097.9	17,011.4
	7.4%	9.1%	9.9%	10.4%	12.4%	11.3%	13.1%	14.1%	12.3%	
Baccalaureate degree	3,040.1	2,602.6	2,010.9	1,898.6	2,187.4	1,871.2	2,110.4	2,089.6	1,732.9	19,543.8
	15.6%	13.3%	10.3%	9.7%	11.2%	9.6%	10.8%	10.7%	8.9%	
Master's degree	80.8	221.5	191.3	198.3	218.8	214.0	208.5	248.9	194.0	1,776.1
	4.5%	12.5%	10.8%	11.2%	12.3%	12.0%	11.7%	14.0%	10.9%	
Total	4,549.4	4,719.9	4,345.8	4,294.2	5,169.3	4,853.2	5,745.0	6,391.0	6,748.8	46,816.7
	9.7%	10.1%	9.3%	9.2%	11.0%	10.4%	12.3%	13.7%	14.4%	

Highest level of nursing education

Previous iterations of this survey asked for the highest level of education with both nursing and non-nursing degrees combined into one question. The 2017 survey asked two separate questions: highest level of nursing education and highest level of non-nursing education. Due to this change, direct comparisons to 2013 and 2015 are not available for non-nursing education. In terms of highest level of nursing education, 64.1% of respondents indicated they had a baccalaureate or higher degree in nursing.

By comparison, the Center to Champion Nursing in America's Campaign for Action Dashboard reported that in 2016, 54% of nurses had a baccalaureate or higher degree in nursing (Campaign Progress, 1027).

A mere 1.1% of responding RNs reported a Doctorate in Nursing Practice (DNP) as their highest level of nursing education. While still a small percentage, this is double the percent of nurses who reported the degree type in 2015 and double the number of nurses with a PhD. See Table 12.

TABLE 12

Highest Level of Nursing Education—RN

Weighted Sample Values						
	2013 (<i>n</i> = 35,016.5)		2015 (<i>n</i> = 38,625.9)		2017 (<i>n</i> = 48,140.7)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Diploma	4,319.4	12.3%	3,551.3	9.2%	3,547.7	7.4%
Associate degree	11,331.6	32.3%	11,608.8	30.0%	13,729.1	28.5%
Baccalaureate degree	14,097.0	40.2%	16,762.5	43.4%	21,744.1	45.2%
Master's degree	4,846.0	13.8%	6,085.1	15.7%	8,238.3	17.1%
Doctoral degree—PhD	217.0	0.6%	340.2	0.9%	284.1	0.6%
Doctoral degree—DNP	142.5	0.4%	239.1	0.6%	551.2	1.1%
Doctoral degree—nursing other	62.9	0.2%	39.0	0.1%	46.1	0.1%

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education”.

Highest level of nursing education by gender. Of those with a DNP, 14.0% are men. Conversely, the vast majority of those with a diploma as their highest level of education are women (96.1%). See Table 13.

TABLE 13

Highest Level of Nursing Education by Gender—RN

Weighted Sample Values			
	Male	Female	<i>n</i>
Diploma	137.9	3,395.3	3,533.3
	3.9%	96.1%	
Associate degree	1,407.0	12,228.6	13,635.6
	10.3%	89.7%	

(continued)

Highest Level of Nursing Education by Gender—RN <i>(continued)</i>			
Weighted Sample Values			
	Male	Female	<i>n</i>
Baccalaureate degree	1,977.5	19,639.1	21,616.6
	9.1%	90.9%	
Master's degree	725.0	7,440.9	8,165.9
	8.9%	91.1%	
Doctoral degree—PhD	17.5	261.9	279.4
	6.3%	93.7%	
Doctoral degree—DNP	76.9	472.5	549.4
	14.0%	86.0%	
Doctoral degree—nursing other	1.9	44.2	46.0
	4.1%	95.9%	
Total	4,347.7	43,488.4	47,836.1
	9.1%	90.9%	

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education.”

Highest level of nursing education by race. Across all-groups, the most common highest level of education is a baccalaureate, except for American Indian or Alaska Native (45.5% associate degree). Asian nurses are much more likely to have a baccalaureate degree (65.6%) as compared to the overall population (45.2%). See Table 14.

TABLE 14

Highest Level of Nursing Education by Race—RN

Weighted Sample Values									
	Vocational/ Practical Certificate	Diploma	Associate Degree	Baccalaureate Degree	Master's Degree	Doctoral degree PhD	Doctoral degree DNP	Doctoral degree nursing other	<i>n</i>
American Indian or Alaska Native	0.0	5.3	72.0	54.9	24.8	0.6	0.6	0.0	158.3
	0.0%	3.4%	45.5%	34.7%	15.7%	0.4%	0.4%	0.0%	
Asian	0.0	178.8	460.3	2,338.9	534.9	27.2	24.1	0.5	3,564.6
	0.0%	5.0%	12.9%	65.6%	15.0%	0.8%	0.7%	0.0%	
Black/African American	0.6	75.8	805.2	1,458.0	510.5	17.3	48.7	1.8	2,917.8
	0.0%	2.6%	27.6%	50.0%	17.5%	0.6%	1.7%	0.1%	
Native Hawaiian or other Pacific Islander	0.0	9.9	38.7	113.4	39.6	0.1	0.3	0.0	201.9
	0.0%	4.9%	19.2%	56.1%	19.6%	0.0%	0.1%	0.0%	
White/Caucasian	7.9	3,130.8	11,046.6	15,774.0	6,437.6	221.3	458.6	42.6	37,119.3
	0.0%	8.4%	29.8%	42.5%	17.3%	0.6%	1.2%	0.1%	
Hispanic/Latino of any race	1.4	80.4	849.5	1,204.6	369.2	8.6	12.1	0.6	2,526.4
	0.1%	3.2%	33.6%	47.7%	14.6%	0.3%	0.5%	0.0%	
Other	0.0	35.2	174.9	285.9	141.0	1.1	1.2	0.0	639.4
	0.0%	5.5%	27.4%	44.7%	22.1%	0.2%	0.2%	0.0%	
Two or more races	0.0	18.4	186.1	368.6	125.5	1.4	4.8	0.0	704.9
	0.0%	2.6%	26.4%	52.3%	17.8%	0.2%	0.7%	0.0%	
Total	9.9	3,534.7	13,633.3	21,598.2	8,183.0	277.5	550.6	45.4	47,832.6
	0.0%	7.4%	28.5%	45.2%	17.1%	0.6%	1.2%	0.1%	

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education.”

Highest level of nursing education by age. Almost half of individuals whose highest level of education is a diploma are older than age 65. Conversely, among those with a baccalaureate, the highest percentage are young nurses (15.4% < 30 years old). See Table 15.

TABLE 15

Highest Level of Nursing Education by Age—RN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	<i>n</i>
Diploma	32.7	39.6	91.7	75.8	142.2	277.8	472.6	781.1	1,541.0	3,454.6
	0.9%	1.1%	2.7%	2.2%	4.1%	8.0%	13.7%	22.6%	44.6%	
Associate degree	898.3	1,142.7	1,204.0	1,291.5	1,585.6	1,541.8	1,854.2	2,023.7	1,912.1	13,453.9
	6.7%	8.5%	8.9%	9.6%	11.8%	11.5%	13.8%	15.0%	14.2%	
Baccalaureate degree	3,281.7	2,618.7	2,092.9	2,070.2	2,471.7	2,131.1	2,335.8	2,275.8	2,018.2	21,296.1
	15.4%	12.3%	9.8%	9.7%	11.6%	10.0%	11.0%	10.7%	9.5%	
Master's degree	344.1	853.1	909.7	836.3	917.6	840.8	992.7	1,182.0	1,189.0	8,065.4
	4.3%	10.6%	11.3%	10.4%	11.4%	10.4%	12.3%	14.7%	14.7%	
Doctoral degree—PhD	0.3	6.0	11.8	13.7	22.3	22.2	40.6	78.8	79.7	275.2
	0.1%	2.2%	4.3%	5.0%	8.1%	8.1%	14.7%	28.6%	28.9%	
Doctoral degree—DNP	22.2	89.5	66.1	40.4	60.9	70.0	89.7	76.0	24.3	539.0
	4.1%	16.6%	12.3%	7.5%	11.3%	13.0%	16.6%	14.1%	4.5%	
Doctoral degree—nursing other	0.0	0.9	0.0	0.6	5.8	3.7	2.9	7.4	23.2	44.6
	0.0%	2.0%	0.0%	1.3%	13.0%	8.3%	6.5%	16.6%	52.1%	
Total	4,579.3	4,750.7	4,376.5	4,328.5	5,207.0	4,887.5	5,789.0	6,427.8	6,791.0	47,137.3
	9.7%	10.1%	9.3%	9.2%	11.0%	10.4%	12.3%	13.6%	14.4%	

Note. In the 2013 and 2015 survey, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education”

Highest level of non-nursing education

Approximately 40% of RN respondents reported an additional degree in a non-nursing discipline. Of those, 35.3% reported an associate level non-nursing degree, 45.8% reported a baccalaureate level non-nursing degree, and an additional 18.9% reported a graduate-level non-nursing degree. See Table 16.

TABLE 16

Highest Level of Non-Nursing Education—RN

Weighted Sample Values		
2017 (<i>n</i> = 19,904.5)		
	<i>n</i>	Percent
Associate degree	7,025.9	35.3%
Baccalaureate degree	9,115.4	45.8%
Master's degree	3,150.8	15.8%
Doctoral degree	612.4	3.1%

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education”

Licensure

Type of license currently held

Respondents were asked to select all of the nursing licenses that they currently hold. Less than 1% of responding RNs also held an LPN/LVN license, while 10.0% held an APRN credential. The percentage of responding RNs who held an APRN credential increased by 1.4 percentage points from 2015 to 2017. See Table 17.

TABLE 17

Type of License Currently Held—RN

Weighted Sample Values						
2013 (n = 41,658.3)			2015 (n = 46,047.8)		2017 (n = 48,128.0)	
	n	Percent	n	Percent	n	Percent
RN	39,521.6	94.9%	43,730.2	95.0%	45,971.3	95.5%
LPN	215.9	0.5%	330.8	0.7%	386.2	0.8%
APRN	3,046.4	7.3%	3,974.7	8.6%	4,788.6	10.0%

Estimated Population Values						
2013			2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
RN	3,266,514	94.9%	3,508,219	95.0%	3,729,318	95.5%
LPN	17,845	0.5%	26,534	0.7%	31,328	0.8%
APRN	251,788	7.3%	318,870	8.6%	388,461	10.0%

Note. Respondents were asked to select all that apply.

Number of years licensed

RN respondents to the 2017 survey were licensed for a median 21 years. Nearly one-third of respondents (32.9%) were licensed for 10 years or less. An additional 19.7% were licensed between 11 and 20 years. These proportions are consistent with those from 2015, 33.5% and 19.5%, respectively. See Table 18.

TABLE 18

Number of Years Licensed—RN

Weighted Sample Values						
	2013 (<i>n</i> = 37,655.3)		2015 (<i>n</i> = 39,771.5)		2017 (<i>n</i> = 46,757.6)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
0-10 years	9,845.5	26.2%	13,307.3	33.5%	15,397.6	32.9%
11-20 years	7,156.2	19.0%	7,753.4	19.5%	9,217.7	19.7%
21-30 years	7,340.5	19.5%	6,855.8	17.2%	8,121.6	17.4%
31-40 years	8,213.0	21.8%	7,311.4	18.4%	8,226.1	17.6%
> 40 years	5,100.0	13.5%	4,543.7	11.4%	5,794.6	12.4%

Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	percent
0-10 years	813,747	26.2%	1,067,569	33.5%	1,249,096	32.9%
11-20 years	591,472	19.0%	622,009	19.5%	747,767	19.7%
21-30 years	606,701	19.5%	549,997	17.2%	658,844	17.4%
31-40 years	678,818	21.8%	586,547	18.4%	667,326	17.6%
> 40 years	421,525	13.5%	364,511	11.4%	470,073	12.4%

Initially licensed in the United States

In 2017, respondents were asked whether they were licensed in the United States initially. This question differs slightly from 2013 and 2015, when respondents were asked in what country they were initially licensed. In 2017, 95.1% of respondents were initially licensed in the United States. This is consistent with results from 2015 (94.6%) and 2013 (95.0%). See Table 19.

TABLE 19

Initially Licensed in the United States—RN

Weighted Sample Values						
2013 (n = 40,393.1)			2015 (n = 45,304.6)		2017 (n = 48,095.0)	
	n	Percent	n	Percent	n	Percent
No	2,027.7	5.0%	2,444.2	5.4%	2,380.3	4.9%
Yes	38,365.4	95.0%	42,860.4	94.6%	45,714.7	95.1%

Estimated Population Values						
2013			2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
No	167,590	5.0%	196,086	5.4%	193,097	4.9%
Yes	3,170,954	95.0%	3,438,441	94.6%	3,708,501	95.1%

Note. In the 2013 and 2015 surveys, respondents were asked “In what country were you initially licensed as an RN or LPN?” In 2017, respondents were asked whether they were initially licensed as an RN or LPN in the United States.

Credentialed to practice as an APRN

Respondents were asked whether they were credentialed in their state as an APRN enabling them to practice in any of the 4 APRN roles, including NP, CNS, CRNA, or CNM. A large number of respondents (88.0%) indicated they were not credentialed as an APRN. This represents a lower proportion than in 2015 or 2013 (89.7% and 90.8% respectively). In 2017, 8.5% reported being credentialed as a nurse practitioner compared to 7.2% in 2015. See Table 20.

TABLE 20

Credentialed to Practice as an APRN

Weighted Sample Values						
2013 (n = 40,053.2)			2015 (n = 43,045.0)		2017 (n = 47,713.6)	
	n	Percent	n	Percent	n	Percent
NP	2,266.4	5.7%	3,129.4	7.2%	4,067.1	8.5%
CNS	1,243.1	3.1%	576.8	1.3%	983.5	2.1%
CRNA	509.1	1.3%	571.9	1.3%	728.7	1.5%
CNM	159.3	0.4%	167.7	0.4%	242.0	0.5%
Not APRN credentialed	35,875.3	90.8%	38,599.3	89.7%	42,960.0	88.0%

Estimated Population Values						
2013			2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
NP	187,325	5.7%	251,053	7.2%	329,933	8.5%
CNS	102,741	3.1%	46,275	1.3%	79,787	2.1%
CRNA	42,078	1.3%	45,879	1.3%	59,114	1.5%
CNM	13,165	0.4%	13,452	0.4%	19,636	0.5%
Not APRN credentialed	2,965,145	90.8%	3,096,595	89.7%	3,407,498	88.0%

(continued)

Note. Respondents were asked to select all that apply. NP = nurse practitioner; CNS = clinical nurse specialist; CRNA = certified registered nurse anesthetist; CNM = certified nurse midwife.

Employment

Employment status

The vast majority of responding RNs (84.6%) were actively employed in nursing and 65.4% were employed in nursing full time. This represents a continued increase in the proportion of RNs working full time from 2015 (62.9%) and 2013 (60.4%). See Table 21.

TABLE 21

Employment Status—RN

Weighted Sample Values						
	2013 (<i>n</i> = 42,145.6)		2015 (<i>n</i> = 46,210.2)		2017 (<i>n</i> = 48,146.9)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Actively employed in nursing full time	25,447.3	60.4%	29,088.5	62.9%	31,476.6	65.4%
Actively employed in nursing part time	6,276.1	14.9%	6,088.0	13.2%	5,820.9	12.1%
Actively employed in nursing per diem	3,069.5	7.3%	3,675.2	8.0%	3,424.9	7.1%
Actively employed, non-nursing full time	1,713.0	4.1%	1,576.1	3.4%	1,108.9	2.3%
Actively employed, non-nursing part time	1,169.0	2.8%	850.8	1.8%	605.7	1.3%
Actively employed, non-nursing per diem	512.7	1.2%	377.7	0.8%	267.5	0.6%
Working in nursing as a volunteer	810.6	1.9%	564.5	1.2%	645.6	1.3%
Unemployed, seeking work as a nurse	1,144.4	2.7%	1,070.7	2.3%	1,030.2	2.1%
Unemployed, not seeking work as a nurse	1,463.3	3.5%	1,611.6	3.5%	1,616.2	3.4%
Retired	4,755.1	11.3%	4,993.7	10.8%	4,916.9	10.2%

Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
Actively employed in nursing full time	2,103,254	60.4%	2,333,606	62.9%	2,553,467	65.4%
Actively employed in nursing part time	518,727	14.9%	488,405	13.2%	472,204	12.1%
Actively employed in nursing per diem	253,696	7.3%	294,837	8.0%	277,834	7.1%
Actively employed, non-nursing full time	141,583	4.1%	126,445	3.4%	89,956	2.3%

(continued)

Employment Status—RN <i>(continued)</i>						
Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
Actively employed, non-nursing part time	96,616	2.8%	68,255	1.8%	49,139	1.3%
Actively employed, non-nursing per diem	42,379	1.2%	30,298	0.8%	21,702	0.6%
Working in nursing as a volunteer	66,996	1.9%	45,288	1.2%	52,374	1.3%
Unemployed, seeking work as a nurse	94,587	2.7%	85,896	2.3%	83,573	2.1%
Unemployed, not seeking work as a nurse	120,945	3.5%	129,287	3.5%	131,114	3.4%
Retired	393,014	11.3%	400,613	10.8%	398,871	10.2%

Note. Respondents were asked to select all that apply.

Reasons for being unemployed

Respondents were asked to select all the reasons for being unemployed. Taking care of home and family was the most frequently selected reason for being unemployed by 47.8% of respondents. The proportion of RNs who indicated that they were unemployed because they experienced difficulty in finding a nursing position were similar in 2015 (15.5%) and 2017 (15.4%). See Table 22.

TABLE 22

Reasons for Being Unemployed—RN

Weighted Sample Values						
	2013 (<i>n</i> = 2,549.0)		2015 (<i>n</i> = 2,272.4)		2017 (<i>n</i> = 2,567.2)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Taking care of home and family	1,258.7	49.4%	1,137.3	50.0%	1,226.8	47.8%
Disabled	486.2	19.1%	298.5	13.1%	347.6	13.5%
Inadequate salary	58.4	2.3%	48.2	2.1%	73.7	2.9%
School	195.4	7.7%	143.1	6.3%	186.0	7.2%
Difficulty in finding a nursing position	672.1	26.4%	352.0	15.5%	395.0	15.4%
Other	774.8	30.4%	557.4	24.5%	758.9	29.6%

(continued)

Note. Respondents were asked to select all that apply.

Number of positions currently held

Respondents were asked to identify the number of positions in which they were currently employed as a nurse. The majority of respondents (83.3%) reported holding just one position as a nurse, which represents a 1.6 percentage point decrease when compared to 2015. The percentage of nurses who reported working in two positions increased from 12.8% in 2015 to 13.9% in 2017. The percentage of respondents who indicated that they held three or more positions in nursing also increased slightly from 2.4% in 2015 to 2.8% in 2017. See Table 23.

TABLE 23

Number of Positions Currently Held—RN

Weighted Sample Values						
	2013 (<i>n</i> = 33,264.5)		2015 (<i>n</i> = 37,114.2)		2017 (<i>n</i> = 39,414.3)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
1	28,069.1	84.4%	31,499.3	84.9%	32,827.2	83.3%
2	4,434.6	13.3%	4,744.0	12.8%	5,496.7	13.9%
3 or more	760.8	2.3%	870.8	2.4%	1,090.5	2.8%

Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
1	2,319,949	84.4%	2,527,010	84.9%	2,663,030	83.3%
2	366,522	13.3%	380,585	12.8%	445,905	13.9%
3 or more	62,883	2.3%	69,861	2.4%	88,463	2.8%

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

Number of hours worked during a typical week in all nursing positions

Hours worked categories were recoded for the 2017 report. Over half (58.6%) of responding RNs reported working 32 to 40 hours in a typical week in all positions. This is consistent with the results from the 2015 survey (58.4%) and only 2.1 percentage points higher than 2013 (56.5%). The second most frequently reported category was 41 to 50 hours (15.8%). This represents a slight decrease from 2015 (16.4%) and 2013 (16.2%). See Table 24.

TABLE 24

Number of Hours Worked During a Typical Week in All Nursing Positions—RN

Weighted Sample Values						
	2013 (n = 32,645.8)		2015 (n = 36,327.6)		2017 (n = 39,293.3)	
	n	Percent	n	Percent	n	Percent
1-15	1,808.9	5.5%	1,697.7	4.7%	1,903.7	4.8%
16-23	1,695.4	5.2%	1,655.7	4.6%	1,728.1	4.4%
24-31	3,397.7	10.4%	3,536.9	9.8%	3,765.0	9.6%
32-40	18,434.1	56.5%	21,174.3	58.4%	23,012.6	58.6%
41-50	5,289.3	16.2%	5,957.3	16.4%	6,198.0	15.8%
51-60	1,369.5	4.2%	1,636.9	4.5%	1,851.3	4.7%
61 or more	651.0	2.0%	578.8	1.6%	834.7	2.1%

Estimated Population Values						
	2013		2015		2017	
	Freq	Percent	Freq	Percent	Freq	Percent
1-15	149,506	5.5%	136,200	4.7%	154,434	4.8%
16-23	140,124	5.2%	132,826	4.6%	140,190	4.4%
24-31	280,825	10.4%	283,745	9.8%	305,426	9.6%
32-40	1,523,600	56.5%	1,698,692	58.4%	1,866,841	58.6%
41-50	437,171	16.2%	477,918	16.4%	502,796	15.8%
51-60	113,192	4.2%	131,318	4.5%	150,180	4.7%
61 or more	53,803	2.0%	46,432	1.6%	67,712	2.1%

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

Primary nursing practice position setting

In the 2017 survey, response options related to primary and secondary practice setting were slightly modified. Hospice and dialysis center were added as new categories. Of those who responded to the question, 55.7% indicated that a hospital was their primary nursing practice. This represents an increase of 1.3 percentage points from 2015 but still fewer than the 56.5% of respondents that selected this setting in 2013. Ambulatory care setting was the second most frequently selected setting by 9.4% of RNs, followed by nursing home/extended care setting selected by 4.8%, and home health selected by 4.3%. Each of the remaining settings were selected by fewer than 3% of the responding nurses. Additionally, 9.8% of respondents selected other. See Table 25.

TABLE 25

Primary Nursing Practice Position Setting—RN

Weighted Sample Values						
	2013 (n = 34,238.0)		2015 (n = 37,372.1)		2017 (n = 38,870.1)	
	n	percent	n	percent	n	percent
Hospital	19,343.5	56.5%	20,311.9	54.4%	21,646.5	55.7%
Nursing home/extended care	2,210.8	6.5%	1,807.2	4.8%	1,859.7	4.8%
Assisted living facility	---	---	233.3	0.6%	211.2	0.5%
Home health	2,057.7	6.0%	2,288.0	6.1%	1,685.9	4.3%
Hospice	---	---	---	---	757.8	1.9%
Correctional facility	229.0	0.7%	259.6	0.7%	294.8	0.8%
School of nursing	1,011.9	3.0%	1,357.0	3.6%	1,028.9	2.6%
Public health	609.2	1.8%	595.4	1.6%	539.3	1.4%
Dialysis center	---	---	---	---	493.6	1.3%
Community health	739.9	2.2%	786.9	2.1%	780.8	2.0%
School health service	1,145.9	3.3%	1,092.8	2.9%	1,025.3	2.6%
Occupational health	224.1	0.7%	250.3	0.7%	292.6	0.8%
Ambulatory care setting	2,994.4	8.7%	4,201.1	11.2%	3,649.2	9.4%
Insurance claims/benefits	477.2	1.4%	673.7	1.8%	694.1	1.8%
Policy/planning/regulatory/licensing agency	152.3	0.4%	148.7	0.4%	86.9	0.2%
Other	3,042.1	8.9%	3,366.3	9.0%	3,823.6	9.8%

Estimated Population Values						
	2013		2015		2017	
	freq	percent	freq	percent	freq	percent
Hospital	1,598,768	56.5%	1,629,506	54.4%	1,756,021	55.7%
Nursing home/extended care	182,724	6.5%	144,982	4.8%	150,865	4.8%
Assisted living facility	---	---	18,718	0.6%	17,132	0.5%
Home health	170,069	6.0%	183,553	6.1%	136,765	4.3%
Hospice	---	---	---	---	61,471	1.9%
Correctional facility	18,930	0.7%	20,828	0.7%	23,918	0.8%
School of nursing	83,637	3.0%	108,863	3.6%	83,466	2.6%
Public health	50,354	1.8%	47,763	1.6%	43,748	1.4%
Dialysis center	---	---	---	---	40,040	1.3%
Community health	61,150	2.2%	63,128	2.1%	63,337	2.0%
School health service	94,708	3.3%	87,666	2.9%	83,178	2.6%
Occupational health	18,519	0.7%	20,080	0.7%	23,736	0.8%
Ambulatory care setting	247,495	8.7%	337,028	11.2%	296,030	9.4%
Insurance claims/benefits	39,445	1.4%	54,046	1.8%	56,306	1.8%
Policy/planning/regulatory/licensing agency	12,586	0.4%	11,930	0.4%	7,050	0.2%
Other	251,438	8.9%	270,057	9.0%	310,178	9.8%

(continued)

Primary Nursing Practice Position Setting—RN (continued)

Note. Survey participants were asked to answer this question only if they were actively employed in nursing. Salary includes overtime and bonuses, but does not include sign-on bonuses.

Primary nursing position title

As in 2015, 58.0% of 2017 respondents indicated that the title that most closely corresponds to their primary nursing position was that of staff nurse. Advanced practice registered nurse was the second most frequently selected position by 10.1% of respondents. This represents an increase from 8.1% in 2015. Between 2013 and 2017, there was a 3.0 percentage point decrease in respondents who indicated that their primary practice position was nurse manager. RNs selecting case manager as their primary position (6.4%) was in alignment with what was reported in 2015 (6.7%). The percentage of respondents who selected nurse faculty/educator increased slightly from 3.8% in 2015 to 4.0% in 2017. Each of the remaining positions were selected by less than 2% of the responding nurses. Additionally, 9.1% of respondents selected other—health related and 0.4% selected other—non-health related. See Table 26.

TABLE 26

Primary Nursing Position Title—RN

Weighted Sample Values						
	2013 (<i>n</i> = 34,356.6)		2015 (<i>n</i> = 37,711.1)		2017 (<i>n</i> = 39,063.1)	
	<i>n</i>	percent	<i>n</i>	percent	<i>n</i>	percent
Consultant	772.5	2.2%	672.4	1.8%	577.4	1.5%
Nurse researcher	251.3	0.7%	247.2	0.7%	235.9	0.6%
Nurse executive	834.4	2.4%	881.4	2.3%	725.3	1.9%
Nurse manager	3,792.0	11.0%	3,045.8	8.1%	3,126.2	8.0%
Nurse faculty/educator	1,105.4	3.2%	1,422.2	3.8%	1,558.2	4.0%
Advanced practice registered nurse	2,531.4	7.4%	3,069.1	8.1%	3,946.1	10.1%
Staff nurse	21,902.1	63.7%	21,920.7	58.1%	22,673.0	58.0%
Case manager	---	---	2,524.8	6.7%	2,519.2	6.4%
Other—health related	3,068.9	8.9%	3,685.1	9.8%	3,561.9	9.1%
Other—non-health related	98.7	0.3%	242.5	0.6%	139.7	0.4%

(continued)

Estimated Population Values						
	2013		2015		2017	
	freq	percent	freq	percent	freq	percent
Consultant	63,846	2.2%	53,944	1.8%	46,844	1.5%
Nurse researcher	20,770	0.7%	19,830	0.7%	19,139	0.6%
Nurse executive	68,962	2.4%	70,706	2.3%	58,836	1.9%
Nurse manager	313,418	11.0%	244,343	8.1%	253,609	8.0%
Nurse faculty/educator	91,360	3.2%	114,099	3.8%	126,408	4.0%
Advanced practice registered nurse	209,222	7.4%	246,214	8.1%	320,121	10.1%
Staff nurse	1,810,238	63.7%	1,758,573	58.1%	1,839,294	58.0%
Case manager	---	---	202,546	6.7%	204,368	6.4%
Other—health related	253,647	8.9%	295,637	9.8%	288,950	9.1%
Other—non-health related	8,155	0.3%	19,453	0.6%	11,332	0.4%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing. Salary includes overtime and bonuses, but does not include sign-on bonuses.

Primary nursing position specialty

Response options related to primary and secondary practice specialty were also modified. Adult health and family health were separated into two categories, cardiology was added as a category, and other was separated into other—clinical and other—non-clinical. Primary care, genetics, informatics, neurology/neurosurgical, orthopedic, radiology, urology, and telehealth were all removed from the list of categories.

In the current study, 14% of RNs reported their primary practice specialty was acute care/critical care compared to 11.4% in 2015. The second most frequently selected specialty was medical-surgical; 8.5% of RN respondents selected this specialty in 2017 compared to 10.1% in 2015. Perioperative was the third most frequently selected specialty by 5.8% of 2017 respondents. RNs selecting other specialties (14.1%) represented a decrease from 17.0% in 2015. See Table 27.

TABLE 27

Primary Nursing Position Specialty—RN

Weighted Sample Values						
	2013 (<i>n</i> = 33,516.5)		2015 (<i>n</i> = 36,424.1)		2017 (<i>n</i> = 37,484.3)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Acute care/critical care	5,789.0	17.3%	4,159.1	11.4%	5,239.2	14.0%
Adult health	871.9	2.6%	756.1	2.1%	1,447.1	3.9%
Family health	---	---	---	---	1,243.4	3.3%
Anesthesia	654.3	2.0%	549.9	1.5%	705.5	1.9%
Cardiology	---	---	---	---	1,291.0	3.4%
Community	335.0	1.0%	356.7	1.0%	386.6	1.0%
Geriatric/gerontology	1,988.8	5.9%	1,754.7	4.8%	1,918.5	5.1%
Home health	1,515.3	4.5%	1,604.0	4.4%	1,360.1	3.6%
Maternal-child health/obstetrics	1,662.2	5.0%	1,633.9	4.5%	1,778.1	4.7%
Medical-surgical	4,248.6	12.7%	3,695.7	10.1%	3,203.1	8.5%
Nephrology	---	---	476.4	1.3%	555.7	1.5%
Occupational health	333.4	1.0%	280.7	0.8%	339.8	0.9%
Oncology	952.7	2.8%	1,044.0	2.9%	1,046.9	2.8%
Palliative care/hospice	498.9	1.5%	529.1	1.5%	643.3	1.7%
Pediatrics	1,995.8	6.0%	1,570.3	4.3%	1,774.1	4.7%
Neonatal	---	---	808.4	2.2%	809.5	2.2%
Perioperative	---	---	2,195.7	6.0%	2,187.7	5.8%
Public health	510.6	1.5%	466.0	1.3%	472.3	1.3%
Psychiatric/mental health/substance abuse	1,340.5	4.0%	1,418.4	3.9%	1,534.1	4.1%
Rehabilitation	691.4	2.1%	717.3	2.0%	725.4	1.9%
School health	1,097.2	3.3%	1,025.1	2.8%	945.5	2.5%
Emergency/trauma	566.0	1.7%	2,026.7	5.6%	2,027.3	5.4%
Women's health	651.3	1.9%	651.7	1.8%	567.1	1.5%
Other—clinical specialties	---	---	---	---	4,507.7	12.0%
Other—non-clinical specialties	---	---	---	---	775.1	2.1%
Other	6,568.4	19.6%	6,200.8	17.0%	---	---
Primary care	1,340.5	2.6%	1,092.5	3.0%	---	---
Genetics	---	---	40.6	0.1%	---	---
Informatics	---	---	318.2	0.9%	---	---
Neurology/neurosurgical	---	---	337.1	0.9%	---	---
Orthopedic	---	---	436.1	1.2%	---	---
Radiology	---	---	191.2	0.5%	---	---
Urology	---	---	87.5	0.2%	---	---
Telehealth	288.5	1.2%	---	---	---	---

(continued)

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

Secondary nursing practice position setting

A little more than a third of RN respondents (36.0%) identified their secondary nursing position setting as being in a hospital. This has consistently been the most frequently selected secondary practice position setting over the past three surveys. The second most frequently selected setting for secondary nursing positions was ambulatory care (9.1%), followed by home health (9.0%) and nursing home/extended care (7.4%). This is slightly different than in 2015, when the top three most frequently selected categories for this question were hospitals (33.5%), home health (11.8%), and school of nursing (10.7%), and similar to the top settings reported for primary practice positions. See Table 28.

TABLE 28

Secondary Nursing Practice Position Setting—RN

Weighted Sample Values						
	2013 (<i>n</i> = 4,415.5)		2015 (<i>n</i> = 4,877.3)		2017 (<i>n</i> = 6,153.3)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Hospital	1,061.5	24.0%	1,632.6	33.5%	2,213.4	36.0%
Nursing home/extended care	502.9	11.4%	277.2	5.7%	456.7	7.4%
Assisted living facility	---	---	58.9	1.2%	58.4	1.0%
Home health	560.5	12.7%	577.5	11.8%	555.7	9.0%
Hospice	---	---	---	---	185.9	3.0%
Correctional facility	52.1	1.2%	72.2	1.5%	68.3	1.1%
School of nursing	439.7	10.0%	519.7	10.7%	493.6	8.0%
Public health	66.8	1.5%	38.1	0.8%	89.2	1.5%
Dialysis center	---	---	---	---	87.7	1.4%
Community health	188.0	4.3%	191.1	3.9%	209.6	3.4%
School health service	191.3	4.3%	171.7	3.5%	173.0	2.8%
Occupational health	90.2	2.0%	39.0	0.8%	57.1	0.9%
Ambulatory care setting	506.7	11.5%	451.2	9.3%	556.7	9.1%
Insurance claims/benefits	38.8	0.9%	39.4	0.8%	51.7	0.8%
Policy/planning/regulatory/licensing agency	19.0	0.4%	6.1	0.1%	7.1	0.1%
Other	698.0	15.8%	802.5	16.5%	889.3	14.5%

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

Secondary nursing position title

The most frequently selected position title that corresponds to secondary nursing practice position was staff nurse (55.8%), followed by advanced practice registered nurse (12.1%), and nurse faculty/educator (9.8%). The percentage of respondents who selected advanced practice registered nurse increased from 2015 to 2017. About 10% of respondents selected another category in both 2015 and 2017. See Table 29.

TABLE 29

Secondary Nursing Position Title—RN

Weighted Sample Values						
	2013 (<i>n</i> = 5,370.9)		2015 (<i>n</i> = 4,857.8)		2017 (<i>n</i> = 6,145.9)	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
Consultant	244.2	4.6%	216.0	4.5%	201.2	3.3%
Nurse researcher	41.6	0.8%	28.9	0.6%	36.2	0.6%
Nurse executive	77.0	1.4%	46.6	1.0%	34.6	0.6%
Nurse manager	301.1	5.6%	143.2	3.0%	235.4	3.8%
Nurse faculty/educator	469.4	8.7%	482.0	9.9%	601.5	9.8%
Advanced practice registered nurse	520.6	9.7%	521.8	10.7%	743.0	12.1%
Staff nurse	3,050.7	56.8%	2,767.9	57.0%	3,430.8	55.8%
Case manager	---	---	157.8	3.4%	256.3	4.2%
Other—health related	628.1	11.7%	475.0	9.8%	573.7	9.3%
Other—non-health related	38.1	0.7%	18.6	0.4%	33.3	0.5%

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

Secondary nursing position specialty

Approximately 10% of respondents (10.2%) reported acute care/critical care as the specialty for their secondary nursing position. The second most frequently selected specialty was medical-surgical (7.7%) followed by geriatric/gerontology (7.4%). See Table 30.

TABLE 30

Secondary Nursing Position Specialty—RN

Weighted Sample Values						
	2013 (n = 5,285.6)		2015 (n = 4,791.1)		2017 (n = 5,895.2)	
	n	Percent	n	Percent	n	Percent
Acute care/critical care	673.1	12.7%	386.2	8.1%	602.6	10.2%
Adult health	187.5	3.6%	124.7	2.6%	309.0	5.2%
Family health	---	---	---	---	149.1	2.5%
Anesthesia	115.2	2.2%	76.2	1.6%	161.2	2.7%
Cardiology	---	---	---	---	119.8	2.0%
Community	120.5	2.3%	72.1	1.5%	116.2	2.0%
Geriatric/gerontology	421.1	8.0%	295.7	6.2%	433.2	7.4%
Home health	414.2	7.8%	404.4	8.4%	378.9	6.4%
Maternal-child health/obstetrics	234.4	4.4%	182.8	3.8%	168.7	2.9%
Medical-surgical	485.9	9.2%	324.5	6.8%	451.5	7.7%
Nephrology	---	---	37.9	0.8%	112.6	1.9%
Occupational health	86.4	1.6%	44.2	0.9%	59.0	1.0%
Oncology	83.4	1.6%	37.5	0.8%	66.6	1.1%
Palliative care/hospice	83.6	1.6%	55.9	1.2%	140.7	2.4%
Pediatrics	243.0	4.6%	219.6	4.6%	242.7	4.1%
Neonatal	---	---	87.5	1.8%	86.3	1.5%
Perioperative	---	---	227.1	4.7%	269.8	4.6%
Public health	81.0	1.5%	46.2	1.0%	87.4	1.5%
Psychiatric/mental health/substance abuse	237.8	4.5%	265.7	5.5%	317.4	5.4%
Rehabilitation	121.5	2.3%	109.7	2.3%	150.3	2.6%
School health	200.0	3.8%	177.7	3.7%	146.0	2.5%
Emergency/trauma	98.1	1.9%	291.5	6.1%	375.1	6.4%
Women's health	68.0	1.3%	53.1	1.1%	79.8	1.4%
Other—clinical specialties	---	---	---	---	714.4	12.1%
Other—non-clinical specialties	---	---	---	---	156.9	2.7%
Other	1,155.4	21.9%	1,033.7	21.6%	---	---
Primary care	134.7	2.6%	144.7	3.0%	---	---
Genetics	---	---	11.0	0.2%	---	---
Informatics	---	---	20.0	0.4%	---	---
Neurology/neurosurgical	---	---	21.0	0.4%	---	---
Orthopedic	---	---	21.5	0.5%	---	---
Radiology	---	---	13.9	0.3%	---	---
Urology	---	---	5.2	0.1%	---	---
Telehealth	40.9	0.8%	---	---	---	---

(continued)

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

Salary/Earnings

2016 pre-tax annual earnings from primary nursing position

The median pre-tax annual earnings for responding RNs increased from \$60,000 in 2015 to \$63,000 in 2017. Categorically, the percentage of respondents earning less than \$40,000 annually decreased by 2.7 percentage points, the percentage making between \$40,000 and \$60,000 decreased by 2.9 percentage points, while those making between \$80,000 and \$100,000 increased by 1.6 percentage points and those making more than \$100,000 increased by nearly 4 percentage points. See Table 31.

TABLE 31

Annual Earnings—RN

Weighted Sample Values				
	2015 (<i>n</i> = 32,455.7)		2017 (<i>n</i> = 35,745.6)	
	<i>n</i>	Percent	<i>n</i>	Percent
Less than \$40,000	4,711.3	14.5%	4,217.8	11.8%
\$40,000 to \$59,999	8,436.8	26.0%	8,243.4	23.1%
\$60,000 to \$79,999	9,202.0	28.4%	10,213.3	28.6%
\$80,000 to \$99,999	5,279.8	16.3%	6,386.3	17.9%
\$100,000 or more	4,825.7	14.9%	6,684.8	18.7%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Less than \$40,000	377,964	14.5%	342,160	11.8%
\$40,000 to \$59,999	676,837	26.0%	668,729	23.1%
\$60,000 to \$79,999	738,224	28.4%	828,530	28.6%
\$80,000 to \$99,999	423,568	16.3%	518,071	17.9%
\$100,000 or more	387,136	14.9%	542,292	18.7%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing. Salary includes overtime and bonuses, but does not include sign-on bonuses. APRNs were included in the RN salary tables.

Earnings by gender and specialty

Looking across all the specialties, the specialty with the highest median salary is anesthesia (\$170,000 overall). Across nearly all specialties, men have a higher median salary than women, except for oncology. See Table 32.

TABLE 32

Median Annual Earnings by Gender and Specialty—RN

	Male	Female	Total
Acute care/critical care	\$76,000	\$70,000	\$70,000
	560	3,420	3,980
Adult health	\$81,496	\$73,685	\$75,000
	97	984	1,081
Family health	\$100,000	\$82,800	\$84,250
	75	1,088	1,163
Anesthesia	\$185,500	\$156,200	\$170,000
	204	344	548
Cardiology	\$73,000	\$70,000	\$70,000
	104	843	947
Community	\$76,200	\$70,000	\$70,500
	25	256	281
Geriatric/gerontology	\$68,000	\$67,000	\$67,000
	107	1,601	1,708
Home health	\$68,000	\$67,000	\$68,000
	62	941	1,003
Maternal-child health/obstetrics	\$76,500	\$67,633	\$68,000
	6	1,297	1,303
Medical-surgical	\$70,000	\$62,000	\$63,000
	197	2,301	2,498
Nephrology	\$80,000	\$74,000	\$75,000
	49	418	467
Occupational health	\$81,500	\$80,000	\$80,000
	24	242	266
Oncology	\$64,432	\$73,000	\$72,000
	31	757	788
Palliative care/hospice	\$70,860	\$66,500	\$67,000
	26	432	458
Pediatrics	\$74,000	\$67,000	\$67,000
	40	1,113	1,153
Neonatal	\$80,000	\$73,000	\$73,000
	16	595	611
Perioperative	\$84,000	\$72,000	\$72,550
	161	1,474	1,635
Public health	\$67,500	\$64,490	\$65,000
	24	422	446
Psychiatric/mental health/substance abuse	\$80,000	\$70,000	\$72,000
	185	1,054	1,239
Rehabilitation	\$70,000	\$65,000	\$65,000
	55	474	529
School health	\$53,000	\$50,000	\$50,000
	14	723	737

(continued)

Median Annual Earnings by Gender and Specialty—RN *(continued)*

	Male	Female	Total
Emergency/trauma	\$75,000	\$70,000	\$70,000
	282	1,274	1,556
Women's health	---	\$70,000	\$70,000
	0	410	410
Total	\$80,000	\$70,000	
	2,651	26,496	

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

Earnings by highest education

Upper-level degrees show large increases in median salary, with the highest of \$104,000 for those with a DNP as their highest degree. See Table 33.

TABLE 33

Median Annual Earnings by Highest Education—RN

	Median Salary	<i>n</i>
Diploma	\$72,900	1,358
Associate degree	\$63,000	8,303
Baccalaureate degree	\$68,000	12,714
Master's degree	\$95,000	4,999
Doctoral degree—PhD	\$100,000	200
Doctoral degree—DNP	\$104,000	413
Doctoral degree—nursing other	\$96,000	37

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

Earnings by state

Median earnings rose in most states. The highest median earnings were for RNs practicing in California (\$88,000), Hawaii (\$85,000), New York (\$80,000), and Oregon (\$80,000). The lowest median earnings were for RNs practicing in South Dakota (\$54,000) and Iowa (\$58,000). See Table 34.

TABLE 34

Median Annual Earnings in Primary Nursing Position by State(s) Where Currently Practicing—RN

	2015	2017		2015	2017
Alabama	\$55,000	\$60,000	Nevada	\$72,000	\$77,000
Alaska	\$70,000	\$76,000	New Hampshire	\$64,000	\$66,500
Arizona	\$69,000	\$70,500	New Jersey	\$76,000	\$75,915
Arkansas	\$56,000	\$61,605	New Mexico	\$62,000	\$69,500
California	\$90,000	\$88,000	New York	\$77,000	\$80,000
Colorado	\$63,000	\$65,000	North Carolina	\$58,890	\$61,000
Connecticut	\$75,000	\$75,000	North Dakota	\$54,000	\$60,000
Delaware	\$71,000	\$71,900	Ohio	\$58,000	\$65,000
District of Columbia	\$75,000	\$79,000	Oklahoma	\$58,326	\$64,000
Florida	\$60,000	\$65,500	Oregon	\$75,000	\$80,000
Georgia	\$64,000	\$68,000	Pennsylvania	\$62,000	\$70,000

(continued)

	2015	2017		2015	2017
Hawaii	\$82,000	\$85,000	Rhode Island	\$70,000	\$70,000
Idaho	\$60,000	\$62,000	South Carolina	\$57,000	\$64,000
Illinois	\$65,000	\$67,000	South Dakota	\$51,000	\$54,000
Indiana	\$53,000	\$64,000	Tennessee	\$55,000	\$62,000
Iowa	\$51,662	\$58,000	Texas	\$68,700	\$72,000
Kansas	\$54,000	\$64,000	Utah	\$53,000	\$65,000
Kentucky	\$60,000	\$64,000	Vermont	\$62,000	\$61,000
Louisiana	\$60,000	\$65,000	Virginia	\$60,000	\$69,000
Maine	\$60,000	\$63,000	Washington	\$70,000	\$75,000
Maryland	\$70,000	\$74,466	West Virginia	\$55,000	\$62,000
Massachusetts	\$75,633	\$76,000	Wisconsin	\$60,000	\$63,000
Michigan	\$60,000	\$67,000	Wyoming	\$64,000	\$65,000
Minnesota	\$64,870	\$66,000	American Samoa	\$48,000	\$71,000
Mississippi	\$58,000	\$60,000	Guam	\$52,000	\$60,000
Montana	\$58,000	\$60,000	Northern Mariana Islands	\$35,000	\$41,600
Nebraska	\$54,000	\$60,000	Virgin Islands	\$62,000	\$74,950

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

Earnings by years licensed and age

For all age-groups, there is a steady increase in median salary as number of years licensed increases. Conversely, there is no clear trend upward as nurses age, which indicates that years licensed is more important than age when predicting salary increases. See Table 35.

TABLE 35

Median Annual Earnings by Years Licensed and Age—RN

	Licensed 0-1 Years	Licensed 2-5 Years	Licensed 6-10 Years	Licensed 11+ Years	Total
< 30	\$50,000	\$55,000	\$63,000	\$78,000	\$55,000
	1,151	1,888	433	1	3,473
30-34	\$50,000	\$60,000	\$66,250	\$70,000	\$62,000
	311	913	1,357	568	3,149
35-39	\$55,000	\$60,000	\$67,000	\$72,000	\$67,000
	179	549	707	1,467	2,902
40-44	\$54,000	\$60,000	\$67,000	\$75,000	\$70,000
	126	391	458	1,979	2,954
45-49	\$52,000	\$60,000	\$68,000	\$78,000	\$74,000
	87	324	359	2,522	3,292
50-54	\$52,880	\$58,000	\$66,000	\$79,200	\$75,000
	66	201	278	3,127	3,672
55-59	\$52,500	\$59,000	\$68,000	\$79,500	\$78,000
	28	112	183	4,161	4,484
60-64	\$50,000	\$60,000	\$63,628	\$80,000	\$80,000
	7	49	97	3,936	4,089
≥ 65	\$60,000	\$68,500	\$71,000	\$78,000	\$78,000
	6	8	16	1,672	1,702
Total	\$50,000	\$58,000	\$66,000	\$78,000	
	1,961	4,435	3,888	19,433	

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

Earnings by APRNs

Certified registered nurse anesthetists have the highest median salary (\$171,000). All APRN certified nurses have a substantially higher median salary than the overall population (\$63,000). See Table 36.

TABLE 36

Median Earnings by APRNs

	Median Salary	n
CNP	\$100,000	2,982
CNS	\$88,000	644
CRNA	\$171,000	557
CNM	\$97,750	186

Note. Sample sizes are unweighted. Survey participants were asked to answer this question only if they were actively employed in nursing. CNP = certified nurse practitioner; CNS = clinical nurse specialist; CRNA = certified nurse anesthetist; CNM = certified nurse midwife.

Telehealth Utilization

Percent of time providing telehealth

Survey findings revealed that 54.1% of responding RNs indicated they were providing nursing services remotely in 2017 compared to 48.8% in 2015. The 31.7% of RN respondents who were spending up to 25% of their time providing services remotely was similar to the 31.4% who indicated such in 2015. Approximately 10% of responding RNs indicated that they spend from 76% to 100% of their time providing nursing services via phone or electronically to patients in a different location. This represents a 3.8 percentage point increase from 2015. See Table 37.

TABLE 37

Percent of Time Providing Telehealth—RN

Weighted Sample Values				
	2015 (n = 37,354.6)		2017 (n = 39,441.6)	
	n	Percent	n	Percent
Never	19,119.1	51.2%	18,095.0	45.9%
1 to 25%	11,710.7	31.4%	12,490.6	31.7%
26 to 50%	2,560.5	6.9%	2,851.2	7.2%
51 to 75%	1,785.3	4.8%	2,201.6	5.6%
76 to 100%	2,179.1	5.8%	3,803.2	9.6%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Never	1,533,811	51.2%	1,467,920	45.9%
1 to 25%	803,549	31.4%	1,013,268	31.7%
26 to 50%	175,691	6.9%	231,294	7.2%
51 to 75%	122,502	4.8%	178,602	5.6%
76 to 100%	149,519	5.8%	308,529	9.6%

(continued)

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

Telehealth across state borders

Of those providing nursing services remotely, 45.7% of responding RNs were providing phone or electronic services to patients or clients across state borders in 2017, compared to 39.4% in 2015. Over one-third of RN respondents (35.8%) provided such services to patients or clients across state borders up to 25% of the time. This represents a 4.1 percentage point increase from 2015. See Table 38.

TABLE 38

Percent of Time Providing Telehealth Across State Borders—RN

Weighted Sample Values				
2015 (n = 18,456.1)			2017 (n = 17,573.3)	
	n	Percent	n	Percent
Never	11,186.7	60.6%	9,535.0	54.3%
1 to 25%	5,843.2	31.7%	6,294.5	35.8%
26 to 50%	626.8	3.4%	692.2	3.9%
51 to 75%	298.5	1.6%	414.0	2.4%
76 to 100%	500.9	2.7%	637.6	3.6%

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

Telehealth across national borders

Only 11.1% of nurses providing remote services to patients or clients provide such services across national borders. Approximately 9% of nurses (9.1%) reported doing so up to 25% of their time. See Table 39.

TABLE 39

Percent of Time Providing Telehealth Across National Borders—RN

Weighted Sample Values				
2015 (<i>n</i> = 18,096.1)			2017 (<i>n</i> = 16,369.8)	
	<i>n</i>	Percent	<i>n</i>	Percent
Never	16,707.2	92.3%	14,548.6	88.9%
1 to 25%	1,194.7	6.6%	1,488.2	9.1%
26 to 50%	96.3	0.5%	129.4	0.8%
51 to 75%	33.7	0.2%	103.7	0.6%
76 to 100%	64.3	0.4%	99.8	0.6%

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

Modes of communication used for telehealth

Nurses providing services via phone or electronically to patients or clients were also asked to identify the modes of communication used; 94.6% of these nurses reported using a telephone. This is 2.5 percentage points fewer than in 2015. Nearly one-third (32.7%) reported using email, which is consistent with the 32.3% who indicated so in 2015. Over 20% reported using electronic messaging in 2017 compared to 18.6% in 2015.

With the exception of telephones, a higher proportion of respondents used each of the modes of communication in 2017 than in 2015. See Table 40.

TABLE 40

Modes of Communication Used for Telehealth—RN

Note. Survey participants were asked to answer this question only if they were actively employed in nursing. Respondents were asked to select all that apply. VoIP = voice over Internet protocol; ICU = intensive care unit.

Discussion and Implications

This study presents a national, randomized survey of 148,684 licensed RNs. Data collected from the 48,704 respondents (32.8%) provide the most recent and detailed information on characteristics of the 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 (IOM; now the National Academy of Medicine) report on the future of nursing (National Academy of Medicine, 2010), including RNs achieving higher levels of education and increased diversity of the nursing workforce.

As of 2017, an estimated 3,951,001 individuals held an active RN license in the United States and its territories (up from 3,728,501 in 2015), representing an increase of 261,275 RN licensees when compared to 2015.

To illustrate trends in workforce supply, the current study's results were compared to national nursing workforce studies that based their findings on data collected years prior to the study publication date. For example, the 2013 National Nursing Workforce study was compared to HRSA's 2010 results, which were collected from RN workforce data collected in 2008. 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, such as the study conducted by Buerhaus, Skinner, Auerbach, and Staiger (2017). 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 2017 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.

The average age of RNs is 51, which is largely consistent with previous study findings (2015 and 2013). The median age of RNs in this study was 53, with 50.9% of the respondents being 50+ years, which is notably higher than the 37% of the full-time equivalent (FTE) RN workforce between age 50 and 69 reported by Buerhaus et al. (2017). In 2015, 12.4% of the RN respondents were age 65 or older compared to 14.6% in the current study, an increase of 2.2 percentage points, which indicates a slow but steady growth of RNs who may be heading for retirement. Buerhaus et al (2017) predicted that as the baby boomer cohort of RNs continues to retire in large numbers, years of nursing experience and knowledge they have accumulated will be lost, having a tremendous impact on health care. An aging population, an aging workforce, and reported nursing shortages across the country have heightened discussions among employers about the utilization of internationally educated nurses to fill the gaps they are experiencing within their health care facilities. The current study found that approximately 5% of the RN workforce obtained their entry-level nursing education outside of the United States. This is consistent with results from 2015 (5.4%) and 2013 (5.0%).

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 8 years. The trend toward a higher percentage of respondents pursuing a BSN degree as their initial nursing education continued in 2017, with 41.8% of the RNs reporting the BSN as the degree that qualified them for their first U.S. nursing license, which reflects a 2.8 percentage point increase when compared to 2015 (39.0%) and a 6.3 percentage point increase when compared to 2013 (35.5%). In 2017, 64.1% of the RNs obtained a baccalaureate or higher degree, which exceeds the 54% reported in 2016 by the Center to Champion Nursing in America Campaign for Action Dashboard (Campaign Progress, 2017). Enrollment in RN-to-BSN programs is increasing in response to calls from within and outside of the profession for a more highly educated nursing workforce. Many professional practice settings, including Magnet hospitals and academic health centers, now require or prefer the baccalaureate degree for specific nursing roles. From 2015 to 2016, enrollments increased by 1.0 percent, marking the 13th year of increases in RN-to-BSN programs (American Association of Colleges of Nursing [AACN], 2017b).

In terms of graduate education, the number of RNs with a master's degree in nursing has increased from 13.8% in 2013 to 17.1% in 2017, an increase of 3.3 percentage points. Although small in terms of percentage, 1.1% of responding RNs reported having a DNP as their highest level of nursing education, which is double the percent of nurses who reported having a DNP in 2015. According to AACN (2017a), the number of students enrolled in DNP programs went from 21,995 in 2015 to 25,289 in 2016, a 15.0% increase. There has been very little movement in terms of the number of RNs with a PhD in nursing. The number of responding RNs with a PhD in nursing went from 0.9% in 2015 to 0.6% in 2017.

In 2015, the IOM (National Academy of Medicine) released a report in brief, "Assessing Progress on the Institute of Medicine Report on The Future of Nursing" (National Academy of Medicine, 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 percentage of male RNs (9.1%) in the workforce in 2017 increased by 2.5 percentage points when compared with findings from the 2013 study (6.6%). The 9.1% male RNs identified in the current study is less than the 12% male FTE RNs identified by Buerhaus et al. (2017). Approximately 5.3% of the RNs indicated that they were of Hispanic or Latino origin compared to 17.8% of the U.S. population (U.S. Census Bureau, 2017a). In the current study 19.2% of the RN respondents were minorities, which includes other and two or more races: Asian (7.5%), Black/African American (6.2%), other (2.9%), and two or more races (1.7%). The percentage of nurses who identify as Asian in the current study exceeds the 5.7% represented in the U.S. population; the percentage of nurses who identify as Black/African American falls below the 13.3% in the U.S. population (U.S. Census Bureau, 2017a).

Of all study respondents with a secondary position in nursing, 9.8% indicated they were nurse faculty compared to 9.9% in 2015. The national shortage of nurse faculty contributed to many qualified nursing school applicants in 2016 being turned down (AACN, 2017c). 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.

In the 2017 survey, response options related to primary and secondary practice setting were slightly modified. Hospice and dialysis center were added as new categories. Hospitals were the primary employment setting for 55.7% of RNs, 54.4% in 2015, but less than the 56.5% reported in 2013. Ambulatory care setting was the second most frequently selected setting reported by 9.4% of RNs, followed by nursing home/extended care (4.8%), and home health (4.3%). Nurses work setting is changing owing 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. This was the second year that items related to telehealth practice by nurses were included in the survey. 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 over half (54.1%) of responding RNs provided nurse services using telehealth technologies. In the current study, 45.7% provided these services across a state border compared to 39.4% in 2015, an increase of 6.3 percentage points, and 11.1% reported providing remote services to patients or clients across national borders, which is an increase of 3.4 percentage points when compared to 2015 (7.7%).

These data raise important questions for employers and regulators. NCSBN is working with states to adopt the national Enhanced Nurse Licensure Compact (eNLC), 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, 2018). The eNLC increases access to care while maintaining public protection at the state level. Under the eNLC, eligible nurses would possess a multistate license issued by their home state (state of residence) and would be able to provide care to patients in other compact states without the time and expense of obtaining additional licenses. As of May 2018, 30 states have adopted the eNLC.

The median pre-tax annual earnings for RNs in the current study increased from \$60,000 in 2015 to \$63,000 in 2017, which is lower than the median salary of \$70,000 for RNs reported by the Bureau of Labor Statistics Occupational Outlook Handbook (U.S. Bureau of Labor Statistics, 2018). In the current study, responding RNs making between \$80,000 and \$100,000 increased by 1.6 percentage points and those making more than \$100,000 increased by nearly 4 percentage points.

Limitations

Missing data exist for certain variables in certain categories. In an effort to present the data in the most accurate manner, the number of weighted valid responses to each question was reported for every table. Missing data were not imputed; hence, the presented statistics represent the weighted responses from participants who responded to each respective survey item. 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.

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 will be slightly younger, highly educated, working in the community providing primary health care, and using technology and telehealth as a means to deliver health care. 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 (National Academy of Medicine, 2010), including achieving higher levels of education, promoting diversity, and improving data collection concerning the national health workforce.

Licensed Practical Nurse/Licensed Vocational Nurse Results

Gender

The current study indicated 92.3% of responding LPNs/LVNs were female and 7.7% of respondents were male. See Table 41.

TABLE 41

Gender Distribution of Nurses—LPN/LVN

Weighted Sample Values				
2015 (n = 28,891.0)			2017 (n = 34,616.8)	
	n	Percent	n	Percent
Male	2,169.7	7.5%	2,670.9	7.7%
Female	26,721.3	92.5%	31,945.9	92.3%

Estimated Population Values				
2015			2017	
	Freq	Percent	Freq	Percent
Male	65,246	7.5%	61,064	7.7%
Female	803,559	92.5%	730,383	92.3%

Race/Ethnicity

One of the changes to the 2017 survey included the modification of the race/ethnicity question. Previously, race and ethnicity categories were listed in one question. The question was modified so that ethnicity and race are now two separate questions. Respondents were first asked whether they were of Hispanic or Latino origin and then asked to identify their race. Anyone who selected more than one race category was recoded into the two or more races category.

Approximately 71% of responding LPNs/LVNs were White/Caucasian compared to 81% of responding RNs. Almost three times as many responding LPNs/LVNs were Black/African American (18.5%) compared to RNs (6.2%). See Tables 42 and 43.

The LPN/LVN workforce is also more ethnically diverse than the RN workforce, with 7.4% of responding LPNs/LVNs indicating that they were of Hispanic or Latino origin compared to 5.3% of RNs.

TABLE 42

Race/Ethnicity-LPN/LVN

Weighted Sample Values				
2015 (n = 28,656.3)			2017 (n = 34,467.5)	
	n	Percent	n	Percent
American Indian or Alaska Native	267.6	0.9%	219.8	0.6%
Asian	1,583.2	5.5%	897.4	2.6%
Black/ African American	4,689.5	16.4%	6,372.4	18.5%
Native Hawaiian or other Pacific Islander	144.4	0.5%	62.4	0.2%
White/Caucasian	20,839.7	72.7%	24,604.0	71.4%
Other race	429.2	1.5%	1,568.5	4.6%
Two or more races	702.6	2.5%	743.1	2.2%

Estimated Population Values				
2015			2017	
	Freq	Percent	Freq	Percent
American Indian or Alaska Native	8,049	0.9%	5,024	0.6%
Asian	47,610	5.5%	20,517	2.6%
Black/ African American	141,021	16.4%	145,692	18.5%
Native Hawaiian or other Pacific Islander	4,343	0.5%	1,427	0.2%

(continued)

Race/Ethnicity-LPN/LVN (continued)

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
White/Caucasian	626,689	72.7%	562,524	71.4%
Other race	12,906	1.5%	35,860	4.6%
Two or more races	21,129	2.5%	16,990	2.2%

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

TABLE 43

Ethnicity of Hispanic or Latino Origin-LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 30,620.8)		2017 (<i>n</i> = 34,449.3)	
	<i>n</i>	Percent	<i>n</i>	Percent
Hispanic or Latino origin	1,964.6	6.4%	2,558.6	7.4%
Not of Hispanic or Latino origin	28,656.3	93.6%	31,890.6	92.6%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Hispanic or Latino origin	59,079	6.4%	58,498	7.4%
Not of Hispanic or Latino origin	861,746	93.6%	729,119	92.6%

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

Race/ethnicity by gender

Results show racial groups other than White/Caucasian are gender diverse. Among White/Caucasian nurses, the percentage of men is 5.8%. This is in stark contrast to all other race and ethnic groups, ranging from 9.7% (American Indian or Alaska Native) to 19.2% (Asian). See Table 44.

TABLE 44

Race/Ethnicity by Gender—LPN/LVN

Weighted Sample Values			
	Male	Female	<i>n</i>
American Indian or Alaska Native	18.9	176.7	195.6
	9.7%	90.3%	
Asian	169.6	714.8	884.3
	19.2%	80.8%	
Black/African American	606.5	5,596.4	6,202.9
	9.8%	90.2%	
Native Hawaiian or other Pacific Islander	7.6	46.8	54.4
	14.0%	86.0%	
White/Caucasian	1,353.9	21,810.5	23,164.4
	5.8%	94.2%	
Hispanic/Latino of any race	373.2	2,173.2	2,546.4
	14.7%	85.3%	
Other	65.4	593.3	658.7
	9.9%	90.1%	
Two or more races	45.9	597.0	642.9
	7.1%	92.9%	
Total	2,641.0	31,708.6	34,349.6
	7.7%	92.3%	

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

Age

In 2017, the median age of LPN/LVN respondents was 54. This is 1 year older than the median age in 2015. More than 50% of respondents were age 50 or older, which is a four percentage point increase from 2015 (46.1%); 13.2% of respondents were age 65 or older in 2017 compared to 9.9% in 2015. See Table 45.

TABLE 45

Age Distribution—LPN/LVN

Weighted Sample Values				
2015 (<i>n</i> = 27,172.4)			2017 (<i>n</i> = 34,454.1)	
	<i>n</i>	Percent	<i>n</i>	Percent
< 30	2,652.5	9.8%	3,072.7	8.9%
30-34	2,579.5	9.5%	2,930.1	8.5%
35-39	2,689.3	9.9%	3,541.2	10.3%
40-44	3,331.8	12.3%	3,539.4	10.3%
45-49	3,375.1	12.4%	4,052.6	11.8%
50-54	3,076.4	11.3%	3,875.0	11.2%
55-59	3,516.3	12.9%	4,428.0	12.9%
60-64	3,264.9	12.0%	4,476.9	13.0%
≥ 65	2,686.6	9.9%	4,538.3	13.2%

(continued)

Estimated Population Values				
2015			2017	
	Freq	Percent	Freq	Percent
< 30	79,764	9.8%	70,251	8.9%
30-34	77,569	9.5%	66,991	8.5%
35-39	80,873	9.9%	80,962	10.3%
40-44	100,194	12.3%	80,921	10.3%
45-49	101,495	12.4%	92,654	11.8%
50-54	92,513	11.3%	88,595	11.2%
55-59	105,742	12.9%	101,239	12.9%
60-64	98,182	12.0%	102,356	13.0%
≥ 65	80,791	9.9%	103,759	13.2%

Age by gender

Among older age-groups (ages 55+), women comprise a much higher proportion than in younger age-groups (ages 30 to 54). See Table 46.

TABLE 46

Age Distribution by Gender—LPN/LVN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	n
Male	303.2	218.8	263.6	286.3	349.9	360.7	291.3	305.3	220.9	2,600.0
	11.7%	8.4%	10.1%	11.0%	13.5%	13.9%	11.2%	11.7%	8.5%	
Female	2,732.4	2,676.0	3,231.3	3,214.9	3,637.8	3,476.8	4,061.3	4,104.1	4,196.6	31,331.2
	8.7%	8.5%	10.3%	10.3%	11.6%	11.1%	13.0%	13.1%	13.4%	
Total	3,035.5	2,894.8	3,495.0	3,501.2	3,987.7	3,837.6	4,352.6	4,409.4	4,417.5	33,931.2
	8.9%	8.5%	10.3%	10.3%	11.8%	11.3%	12.8%	13.0%	13.0%	

Age by race/ethnicity

Hispanic LPNs/LVNs are more likely to be in age-groups under 40 as compared to other race and ethnic groups. See Table 47.

TABLE 47

Age Distribution by Race/Ethnicity—LPN/LVN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	<i>n</i>
American Indian or Alaska Native	9.1	13.7	27.3	20.5	22.7	26.9	23.2	22.7	21.5	187.4
	4.9%	7.3%	14.6%	10.9%	12.1%	14.3%	12.4%	12.1%	11.5%	
Asian	104.9	127.3	120.1	116.4	112.4	89.1	77.2	81.8	53.1	882.3
	11.9%	14.4%	13.6%	13.2%	12.7%	10.1%	8.7%	9.3%	6.0%	
Black/African American	399.1	508.0	732.1	815.9	789.6	737.1	726.4	636.1	747.4	6,091.7
	6.6%	8.3%	12.0%	13.4%	13.0%	12.1%	11.9%	10.4%	12.3%	
Native Hawaiian or other Pacific Islander	2.1	4.7	3.4	16.2	2.9	10.2	3.4	4.6	6.1	53.6
	3.9%	8.8%	6.3%	30.2%	5.4%	19.0%	6.3%	8.6%	11.4%	
White/Caucasian	2,012.0	1,796.8	2,090.6	2,146.7	2,610.7	2,577.2	3,156.4	3,301.6	3,203.4	22,895.3
	8.8%	7.8%	9.1%	9.4%	11.4%	11.3%	13.8%	14.4%	14.0%	
Hispanic/Latino of any race	374.2	358.7	364.3	258.8	282.6	220.9	231.4	173.9	243.6	2,508.3
	14.9%	14.3%	14.5%	10.3%	11.3%	8.8%	9.2%	6.9%	9.7%	
Other	35.1	34.6	62.4	46.6	84.0	81.7	81.7	117.5	105.1	648.6
	5.4%	5.3%	9.6%	7.2%	12.9%	12.6%	12.6%	18.1%	16.2%	
Two or more races	79.8	57.6	93.4	66.0	82.9	75.7	73.6	63.9	39.9	632.9
	12.6%	9.1%	14.8%	10.4%	13.1%	12.0%	11.6%	10.1%	6.3%	
Total	3,016.4	2,901.4	3,493.6	3,487.1	3,987.7	3,818.5	4,373.3	4,402.0	4,420.0	33,900.1
	8.9%	8.6%	10.3%	10.3%	11.8%	11.3%	12.9%	13.0%	13.0%	

Note. In the 2013 and 2015 surveys, the Hispanic/Latino origin and race categories were combined into one question. For the race question, respondents were asked to select all that apply. The responses were subsequently recoded to ensure that the race categories were mutually exclusive. Respondents selecting multiple race categories were reclassified into the 'Two or more races' category.

Education**Type of nursing degree or credential for first U.S. nursing license**

In this survey, 83.2% of respondents indicated that a vocational/practical certificate in nursing qualified them for their first U.S. nursing license. An additional 12.0% reported that a diploma in nursing qualified them for their first U.S. nursing license, while 4.5% indicated that it was an associate degree in nursing. See Table 48.

TABLE 48

Type of Nursing Degree or Credential for First U.S. Nursing License—LPN/LVN

Weighted Sample Values				
2015 (<i>n</i> = 30,231.1)			2017 (<i>n</i> = 34,108.8)	
	<i>n</i>	Percent	<i>n</i>	Percent
Vocational/practical certificate	25,257.4	83.6%	28,395.0	83.2%
Diploma	3,661.3	12.1%	4,098.6	12.0%
Associate degree	1,168.8	3.9%	1,521.3	4.5%
Baccalaureate degree	135.8	0.5%	93.9	0.3%

Estimated Population Values				
2015			2017	
	Freq	Percent	Freq	Percent
Vocational/practical certificate	759,537	83.6%	649,197	83.2%
Diploma	110,101	12.1%	93,707	12.0%
Associate degree	35,146	3.9%	34,782	4.5%
Baccalaureate degree	4,085	0.5%	2,146	0.3%

(continued)

Type of nursing degree or credential for first U.S. nursing license by age. Those whose initial education to receive their license was an associate degree were more likely to be in the younger age-groups. This is opposite of the trend with RNs, where those whose initial education was an associate degree were more likely to be older. See Table 49.

TABLE 49

Type of Nursing Degree or Credential for First U.S. Nursing License by Age—LPN/LVN

Weighted Sample Values										
Age cohort	< 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	≥ 65	n
Vocational/practical certificate	2,527.0	2,251.5	2,743.6	2,718.7	3,199.1	3,112.8	3,680.0	3,859.8	3,783.5	27,876.0
	9.1%	8.1%	9.8%	9.8%	11.5%	11.2%	13.2%	13.8%	13.6%	
Diploma	336.7	421.0	485.0	541.6	510.2	487.8	463.3	384.1	375.9	4,005.6
	8.4%	10.5%	12.1%	13.5%	12.7%	12.2%	11.6%	9.6%	9.4%	
Associate degree	142.7	184.8	215.1	177.6	217.1	166.8	140.6	120.5	128.3	1,493.7
	9.6%	12.4%	14.4%	11.9%	14.5%	11.2%	9.4%	8.1%	8.6%	
Baccalaureate degree	6.1	5.1	9.4	11.9	16.7	11.1	22.5	7.3	3.4	93.5
	6.5%	5.5%	10.1%	12.7%	17.9%	11.9%	24.1%	7.8%	3.6%	
Total	3,012.5	2,862.4	3,453.2	3,449.8	3,943.8	3,778.6	4,306.5	4,371.7	4,292.0	33,470.5
	9.0%	8.6%	10.3%	10.3%	11.8%	11.3%	12.9%	13.1%	12.8%	

Highest level of nursing education

In terms of highest level of nursing education, 77.8% of respondents indicated that a vocational/practical certificate in nursing was their highest level of nursing education. This represents a slight increase of 1.8 percentage points from 2015 (76.0%). See Table 50.

TABLE 50

Highest Level of Nursing Education—LPN/LVN

Weighted Sample Values				
	2015 (n = 25,626.5)		2017 (n = 34,208.6)	
	n	Percent	n	Percent
Vocational/practical certificate	19,481.3	76.0%	26,615.3	77.8%
Diploma	3,882.5	15.2%	4,900.8	14.3%
Associate degree	1,888.6	7.4%	2,509.6	7.3%
Baccalaureate degree	308.5	1.2%	182.8	0.5%

(continued)

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education.”

Highest level of nursing education by race. Across nearly all race/ethnicity groups the most common highest level of education is the vocational/practical certificate. Asian nurses are substantially more likely to have a baccalaureate degree as their highest education as compared to other groups (8.1% versus 0.5% overall). See Table 51.

TABLE 51

Highest Level of Nursing Education by Race—LPN/LVN

Weighted Sample Values					
	Vocational/Practical Certificate	Diploma	Associate Degree	Baccalaureate Degree	<i>n</i>
American Indian or Alaska Native	136.7	24.7	27.3	0.7	189.4
	72.2%	13.0%	14.4%	0.4%	
Asian	539.4	146.3	111.3	71.0	871.6
	61.9%	16.8%	12.8%	8.1%	
Black/African American	4,388.1	1,146.6	519.4	32.1	6,088.3
	72.1%	18.8%	8.5%	0.5%	
Native Hawaiian or other Pacific Islander	38.7	8.8	3.2	1.6	52.2
	74.0%	16.8%	6.1%	3.1%	
White/Caucasian	18,254.9	3,062.3	1,539.6	57.5	22,917.1
	79.7%	13.4%	6.7%	0.3%	
Hispanic/Latino of any race	2,044.2	256.8	178.0	9.1	2,488.1
	82.2%	10.3%	7.2%	0.4%	
Other	501.1	81.9	63.7	6.3	654.0
	76.6%	12.5%	9.7%	1.0%	
Two or more races	458.9	120.3	47.1	3.3	629.7
	72.9%	19.1%	7.5%	0.5%	
Total	26,362.0	4,847.6	2,489.6	181.5	33,890.4
	77.8%	14.3%	7.3%	0.5%	

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education.”

Highest level of non-nursing education

Almost a quarter of responding LPNs/LVNs indicated they had a non-nursing degree. Of those respondents, 68.8% reported an associate level non-nursing degree, 25.0% reported a baccalaureate level non-nursing degree, and an additional 6.2% reported a graduate level non-nursing degree. See Table 52.

TABLE 52

Highest Level of Non-Nursing Education—LPN/LVN

Weighted Sample Values		
2017 (n = 9,832.6)		
	n	Percent
Associate degree	6,762.0	68.8%
Baccalaureate degree	2,460.1	25.0%
Master's degree	515.6	5.2%
Doctoral degree	95.0	1.0%

Note. In the 2013 and 2015 surveys, a single question “What is your highest level of education?” was asked, with the set of possible responses including both nursing and non-nursing degrees. In 2017, two separate questions were asked, “Highest level of nursing education” and “Highest level of non-nursing education.”

Licensure

Number of years licensed

LPN/LVN respondents to the 2017 survey were licensed for a median 19 years. Almost 40.7% of 2017 respondents were licensed for 10 years or less compared to 43.7% in 2015. An additional 19.8% were licensed between 11 and 20 years, which is consistent with the 20.1% who were licensed as long in 2015. See Table 53.

TABLE 53

Number of Years Licensed—LPN/LVN

Weighted Sample Values				
	2015 (n = 26,138.0)		2017 (n = 33,652.6)	
	n	Percent	n	Percent
0-10 years	11,417.8	43.7%	13,694.1	40.7%
11-20 years	5,258.9	20.1%	6,674.0	19.8%
21-30 years	4,018.0	15.4%	5,483.9	16.3%
31-40 years	3,552.0	13.6%	4,531.9	13.5%
> 41 years	1,891.4	7.2%	3,268.6	9.7%

(continued)

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
0-10 years	343,353	43.7%	313,090	40.7%
11-20 years	158,145	20.1%	152,589	19.8%
21-30 years	120,828	15.4%	125,379	16.3%
31-40 years	106,815	13.6%	103,614	13.5%
> 41 years	56,877	7.2%	74,730	9.7%

Initially licensed in the United States

In this survey, 97.5% of LPN/LVN respondents were initially licensed in the United States. This is consistent with results from 2015 (98.5%). See Table 54.

TABLE 54

Initially Licensed in the United States—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 30,179.4)		2017 (<i>n</i> = 34,598.2)	
	<i>n</i>	Percent	<i>n</i>	Percent
No	447.8	1.5%	878.9	2.5%
Yes	29,731.6	98.5%	33,719.3	97.5%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
No	13,466	1.5%	20,095	2.5%
Yes	894,084	98.5%	770,929	97.5%

Note. In the 2015 survey, respondents were asked “In what country were you initially licensed as an RN or LPN?”

Employment

Employment status

Among responding LPNs/LVNs, 65.0% reported being actively employed in nursing full time, which is an increase over 2 years ago. The most notable decrease was among those who selected unemployed, seeking work as a nurse, which decreased from 5.1% in 2015 to 3.4% in 2017. See Table 55.

TABLE 55

Employment Status—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 30,766.0)		2017 (<i>n</i> = 34,570.2)	
	<i>n</i>	Percent	<i>n</i>	Percent
Actively employed in nursing full time	18,823.4	61.2%	22,476.5	65.0%
Actively employed in nursing part time	3,714.0	12.1%	4,151.9	12.0%
Actively employed in nursing per diem	2,179.4	7.1%	2,227.5	6.4%
Actively employed, non-nursing full time	1,504.3	4.9%	1,306.6	3.8%
Actively employed, non-nursing part time	868.5	2.8%	756.7	2.2%
Actively employed, non-nursing per diem	386.7	1.3%	193.6	0.6%
Working in nursing as a volunteer	366.1	1.2%	408.9	1.2%
Unemployed, seeking work as a nurse	1,558.7	5.1%	1,162.0	3.4%
Unemployed, not seeking work as a nurse	1,588.9	5.2%	1,595.0	4.6%
Retired	2,927.1	9.5%	2,991.2	8.7%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Actively employed in nursing full time	566,053	61.2%	513,884	65.0%
Actively employed in nursing part time	111,686	12.1%	94,925	12.0%
Actively employed in nursing per diem	65,540	7.1%	50,928	6.4%
Actively employed, non-nursing full time	45,236	4.9%	29,874	3.8%
Actively employed, non-nursing part time	26,116	2.8%	17,301	2.2%
Actively employed, non-nursing per diem	11,629	1.3%	4,427	0.6%
Working in nursing as a volunteer	11,008	1.2%	9,350	1.2%
Unemployed, seeking work as a nurse	46,873	5.1%	26,566	3.4%
Unemployed, not seeking work as a nurse	47,782	5.2%	36,467	4.6%
Retired	88,024	9.5%	68,387	8.7%

(continued)

Note. Respondents were asked to select all that apply.

Reasons for being unemployed

Respondents were asked to select all the applicable reasons for being unemployed. Taking care of home and family was the most frequently selected reason for being unemployed; 41.4% of LPN/LVN respondents selected this reason in 2017, compared to 39.1% in 2015. The second and third most frequently selected reasons were other by 26.4% of respondents followed by disabled (21.1%). By comparison, the second most frequently selected reason in 2015 was difficulty in finding a nursing position (23.1%) followed by other (22.7%). See Table 56.

TABLE 56

Reasons for Being Unemployed—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 2,644.5)		2017 (<i>n</i> = 2,696.8)	
	<i>n</i>	Percent	<i>n</i>	Percent
Taking care of home and family	1,033.0	39.1%	1,117.4	41.4%
Disabled	463.3	17.5%	570.0	21.1%
Inadequate salary	77.9	3.0%	111.5	4.1%
School	393.9	14.9%	288.4	10.7%
Difficulty in finding a nursing position	610.4	23.1%	419.6	15.6%
Other	600.1	22.7%	713.0	26.4%

(continued)

Note. Respondents were asked to select all that apply.

Number of positions currently held

Respondents were asked to identify the number of positions in which they were currently employed as a nurse. In 2017, 82.4% of LPN/LVN respondents indicated holding just one position as a nurse compared to 84.5% in 2015. The percentage of nurses who reported working in two positions increased from 13.4% in 2015 to 14.9% in 2017. The percentage of respondents who indicated that they held three or more positions in nursing also increased slightly from 2.1% in 2015 to 2.7% in 2017. See Table 57.

TABLE 57

Number of Positions Currently Held—LPN/LVN

Weighted Sample Values				
	2015 (n = 23,317.3)		2017 (n = 27,576.8)	
	n	Percent	n	Percent
1	19,706.5	84.5%	22,725.0	82.4%
2	3,113.0	13.4%	4,117.5	14.9%
3 or more	497.8	2.1%	734.3	2.7%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
1	592,611	84.5%	519,563	82.4%
2	93,613	13.4%	94,139	14.9%
3 or more	14,970	2.1%	16,788	2.7%

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

Number of hours worked during a typical week in all nursing positions

In this survey, 59.4% of responding LPNs/LVNs reported working 32 to 40 hours in a typical week in all positions, representing a decrease of less than one percentage point. The second most frequently reported category was 41 to 50 hours (16.0%). This represents a slight increase from 2015 (15.2%). See Table 58.

TABLE 58

Number of Hours Worked During a Typical Week in All Nursing Positions—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 22,450.6)		2017 (<i>n</i> = 27,505.7)	
	<i>n</i>	Percent	<i>n</i>	Percent
1-15	913.1	4.1%	1,132.6	4.1%
16-23	1,088.9	4.9%	1,298.4	4.7%
24-31	1,866.4	8.3%	2,031.1	7.4%
32-40	13,562.8	60.4%	16,328.2	59.4%
41-50	3,410.0	15.2%	4,412.7	16.0%
51-60	928.3	4.1%	1,391.1	5.1%
61 or more	681.1	3.0%	911.5	3.3%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
1-15	27,459	4.1%	25,896	4.1%
16-23	32,744	4.9%	29,686	4.7%
24-31	56,126	8.3%	46,437	7.4%
32-40	407,859	60.4%	373,314	59.4%
41-50	102,546	15.2%	100,888	16.0%
51-60	27,916	4.1%	31,805	5.1%
61 or more	20,482	3.0%	20,841	3.3%

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

Primary nursing practice position setting

In the 2017 survey, response options related to primary and secondary practice setting were slightly modified. Hospice and dialysis center were added as new categories. Of those LPNs/LVNs who responded to the question, 31.7% indicated that their primary nursing practice position was in a nursing home/extended care setting. This represents an increase of 1.6 percentage points from 2015. Home health was

the second most frequently selected setting by 14% of LPNs/LVNs, followed by ambulatory care selected by 6.8%. The percentage of respondents who selected other increased from 14.9% in 2015 to 17.4% in 2017. See Table 59.

TABLE 59

Primary Nursing Practice Position Setting—LPN/LVN

Weighted Sample Values				
	2015 (n = 22,989.1)		2017 (n = 26,459.8)	
	n	Percent	n	Percent
Hospital	2,478.9	10.8%	2,540.3	9.6%
Nursing home/extended care	6,911.9	30.1%	8,385.3	31.7%
Assisted living facility	1,369.5	6.0%	1,484.2	5.6%
Home health	3,451.0	15.0%	3,710.5	14.0%
Hospice	---	---	426.6	1.6%
Correctional facility	670.2	2.9%	738.6	2.8%
School of nursing	142.0	0.6%	78.4	0.3%
Public health	399.8	1.7%	498.3	1.9%
Dialysis center	---	---	165.8	0.6%
Community health	922.6	4.0%	888.1	3.4%
School health service	683.9	3.0%	697.4	2.6%
Occupational health	174.9	0.8%	166.6	0.6%
Ambulatory care setting	2,061.2	9.0%	1,797.3	6.8%
Insurance claims/benefits	259.7	1.1%	241.3	0.9%
Policy/planning/regulatory/licensing agency	32.3	0.1%	24.4	0.1%
Other	3,431.2	14.9%	4,616.7	17.4%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Hospital	74,544	10.8%	58,079	9.6%
Nursing home/extended care	207,854	30.1%	191,715	31.7%
Assisted living facility	41,183	6.0%	33,933	5.6%
Home health	103,779	15.0%	84,834	14.0%
Hospice	---	---	9,753	1.6%
Correctional facility	20,154	2.9%	16,887	2.8%
School of nursing	4,270	0.6%	1,792	0.3%
Public health	12,022	1.7%	11,394	1.9%
Dialysis center	---	---	3,790	0.6%
Community health	27,745	4.0%	20,305	3.4%
School health service	20,565	3.0%	15,945	2.6%
Occupational health	5,260	0.8%	3,810	0.6%
Ambulatory care setting	61,984	9.0%	41,091	6.8%
Insurance claims/benefits	7,810	1.1%	5,517	0.9%
Policy/planning/regulatory/licensing agency	973	0.1%	557	0.1%
Other	103,182	14.9%	105,553	17.4%

(continued)

Primary Nursing Practice Position Setting—LPN/LVN (continued)

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

Primary nursing position title

In 2017, 73.1% of LPN/LVN respondents indicated that the title that most closely corresponds to their primary nursing position was that of staff nurse, an increase of 4.3 percentage points from 2015. The second most frequently selected position title was other—health-related. The proportion of respondents who selected other—health-related increased from 14.6% in 2015 to 16.0% in 2017. A higher proportion of LPNs/LVNs selected nurse manager in 2017 (6.2%) than in 2015 (5.8%). See Table 60.

TABLE 60

Primary Nursing Position Title—LPN/LVN

Weighted Sample Values				
	2015 (n = 23,567.8)		2017 (n = 26,776.9)	
	n	Percent	n	Percent
Consultant	140.6	0.6%	152.7	0.6%
Nurse researcher	65.0	0.3%	51.2	0.2%
Nurse executive	137.6	0.6%	70.9	0.3%
Nurse manager	1,365.4	5.8%	1,661.5	6.2%
Nurse faculty/educator	967.9	4.1%	257.5	1.0%
Advanced practice registered nurse	401.7	1.7%	9.0	0.0%
Staff nurse	16,214.1	68.8%	19,564.6	73.1%
Case manager	595.3	2.5%	561.4	2.1%
Other—health related	3,444.2	14.6%	4,275.5	16.0%
Other—non-health related	236.0	1.0%	172.7	0.6%

(continued)

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Consultant	4,227	0.6%	3,490	0.6%
Nurse researcher	1,955	0.3%	1,170	0.2%
Nurse executive	4,138	0.6%	1,621	0.3%
Nurse manager	41,060	5.8%	37,986	6.2%
Nurse faculty/educator	29,107	4.1%	5,887	1.0%
Advanced practice registered nurse	12,079	1.7%	206	0.0%
Staff nurse	487,589	68.8%	447,308	73.1%
Case manager	17,902	2.5%	12,835	2.1%
Other–health related	103,572	14.6%	97,751	16.0%
Other–non-health related	7,097	1.0%	3,949	0.6%

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

Primary nursing position speciality

Response options related to primary and secondary practice specialty were modified from the 2015 instrument. Adult health and family health were separated into two categories; cardiology was added as a category; and other was separated into other–clinical and other–non-clinical. Primary care, genetics, informatics, neurology/neurosurgical, orthopedic, radiology, urology, and telehealth were all removed from the list of categories.

Of LPN/LVN respondents, 30.5% selected geriatrics as the employment specialty that most closely corresponded to their primary nursing practice position. The second most frequently selected employment specialty was home health (8.8%) followed by adult health (7.8%). A smaller proportion of LPNs/LVNs selected other in 2017 (12.1%) compared to 2015 (15.5%). The 12.1% who comprised other in 2017 included the 10.8% of LPN/LVN respondents who indicated other–clinical specialties and 1.3% who indicated other–non-clinical specialties. See Table 61.

TABLE 61

Primary Nursing Position Specialty—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 21,932.4)		2017 (<i>n</i> = 25,214.9)	
	<i>n</i>	Percent	<i>n</i>	Percent
Acute care/critical care	458.5	2.1%	670.0	2.7%
Adult health	960.6	4.4%	1,968.0	7.8%
Family health	---	---	1,712.4	6.8%
Anesthesia	18.0	0.1%	17.6	0.1%
Cardiology	---	---	250.4	1.0%
Community	262.6	1.2%	216.8	0.9%
Geriatric/gerontology	6,064.1	27.7%	7,685.8	30.5%
Home health	2,109.3	9.6%	2,228.2	8.8%
Maternal-child health/obstetrics	120.5	0.6%	225.1	0.9%
Medical-surgical	777.3	3.5%	728.6	2.9%
Nephrology	133.7	0.6%	201.0	0.8%
Occupational health	154.5	0.7%	160.8	0.6%
Oncology	137.1	0.6%	152.9	0.6%
Palliative care/hospice	348.2	1.6%	354.7	1.4%
Pediatrics	1,326.0	6.1%	1,880.2	7.5%
Neonatal	28.2	0.1%	28.8	0.1%
Perioperative	93.1	0.4%	76.4	0.3%
Public health	173.1	0.8%	257.6	1.0%
Psychiatric/mental health/substance abuse	1,084.8	5.0%	1,205.0	4.8%
Rehabilitation	847.7	3.9%	1,081.5	4.3%
School health	612.9	2.8%	646.2	2.6%
Emergency/trauma	157.2	0.7%	127.5	0.5%
Women's health	342.8	1.6%	291.0	1.2%
Other—clinical specialties	---	---	2,724.1	10.8%
Other—non-clinical specialties	---	---	324.1	1.3%
Other	3,400.7	15.5%	---	---
Primary care	1,695.5	7.7%	---	---
Genetics	182.2	0.8%	---	---
Informatics	41.4	0.2%	---	---
Neurology/neurosurgical	90.6	0.4%	---	---
Orthopedic	185.5	0.9%	---	---
Radiology	24.2	0.1%	---	---
Urology	102.1	0.5%	---	---

(continued)

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Acute care/critical care	13,787	2.1%	15,319	2.7%
Adult health	28,888	4.4%	44,995	7.8%
Family health	---	---	39,151	6.8%
Anesthesia	542	0.1%	401	0.1%
Cardiology	---	---	5,725	1.0%
Community	7,896	1.2%	4,956	0.9%
Geriatric/gerontology	182,359	27.7%	175,722	30.5%
Home health	63,430	9.6%	50,944	8.8%
Maternal-child health/obstetrics	3,623	0.6%	5,148	0.9%
Medical-surgical	23,375	3.5%	16,659	2.9%
Nephrology	4,022	0.6%	4,595	0.8%
Occupational health	4,647	0.7%	3,677	0.6%
Oncology	4,124	0.6%	3,497	0.6%
Palliative care/hospice	10,471	1.6%	8,109	1.4%
Pediatrics	39,875	6.1%	42,988	7.5%
Neonatal	848	0.1%	659	0.1%
Perioperative	2,798	0.4%	1,747	0.3%
Public health	5,207	0.8%	5,889	1.0%
Psychiatric/mental health/substance abuse	32,622	5.0%	27,550	4.8%
Rehabilitation	25,493	3.9%	24,727	4.3%
School health	18,432	2.8%	14,774	2.6%
Emergency/trauma	4,729	0.7%	2,915	0.5%
Women's health	10,308	1.6%	6,653	1.2%
Other-clinical specialties	---	---	62,282	10.8%
Other-non-clinical specialties	---	---	7,411	1.3%
Other	102,266	15.5%	---	---
Primary care	50,986	7.7%	---	---
Genetics	5,480	0.8%	---	---
Informatics	1,244	0.2%	---	---
Neurology/neurosurgical	2,723	0.4%	---	---
Orthopedic	5,577	0.9%	---	---
Radiology	727	0.1%	---	---
Urology	3,071	0.5%	---	---

(continued)

Primary Nursing Position Specialty—LPN/LVN (continued)

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

Secondary nursing position setting

Nursing home/extended care settings was the most frequently chosen setting by 32.5% of LPN/LVN respondents as their secondary nursing position. This represents 5.6 percentage point increase from 2015. At the same time, the percentage of LPNs/LVNs who indicated their secondary nursing position was in a home health setting decreased by 5.1 percentage points from 31.9% in 2015 to 26.8% in 2017. The percentage that identified an assisted living facility to be their secondary nursing position setting saw little change between the two surveys. See Table 62.

TABLE 62

Secondary Nursing Position Setting—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 3,018.7)		2017 (<i>n</i> = 4,376.2)	
	<i>n</i>	percent	<i>n</i>	percent
Hospital	180.4	6.0%	261.2	6.0%
Nursing home/extended care	813.3	26.9%	1,422.0	32.5%
Assisted living facility	232.5	7.7%	332.3	7.6%
Home health	961.3	31.9%	1,173.1	26.8%
Hospice	---	---	115.7	2.6%
Correctional facility	108.7	3.6%	136.6	3.1%
School of nursing	32.7	1.1%	10.4	0.2%
Public health	30.3	1.0%	55.8	1.3%
Dialysis center	---	---	35.0	0.8%
Community health	69.1	2.3%	85.2	2.0%
School health service	42.1	1.4%	111.9	2.6%
Occupational health	16.9	0.6%	31.1	0.7%
Ambulatory care setting	78.4	2.6%	121.7	2.8%
Insurance claims/benefits	6.5	0.2%	22.8	0.5%
Policy/planning/regulatory/licensing agency	15.9	0.5%	16.6	0.4%
Other	430.5	14.3%	444.8	10.2%

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

Secondary nursing position title

Over three-quarters of LPN/LVN respondents reported their secondary nursing position title as staff nurse. This represents an increase of 5.8 percentage points between 2015 and 2017. The percentage of LPNs/LVNs who reported a secondary nursing position title of nurse manager increased by 1.4 percentage points from 2015 to 2017. The percentage of LPN/LVN respondents who were nurse faculty/educators in their secondary nursing position decreased from 4.4% in 2015 to 1.4% in 2017. See Table 63.

TABLE 63

Secondary Nursing Position Title—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 2,980.3)		2017 (<i>n</i> = 4,217.2)	
	<i>n</i>	Percent	<i>n</i>	Percent
Consultant	37.5	1.3%	45.2	1.1%
Nurse researcher	7.0	0.2%	1.3	0.0%
Nurse executive	10.4	0.4%	10.0	0.2%
Nurse manager	59.9	2.0%	141.4	3.4%
Nurse faculty/educator	132.0	4.4%	58.4	1.4%
Advanced practice registered nurse	34.1	1.1%	2.6	0.1%
Staff nurse	2,167.2	72.7%	3,309.2	78.5%
Case manager	53.8	1.8%	66.6	1.6%
Other—health related	440.3	14.8%	528.9	12.5%
Other—non-health related	38.3	1.3%	53.5	1.3%

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

Secondary nursing position specialty

Over one-third of LPNs/LVNs (34.5%) reported their secondary nursing position specialty was geriatric/gerontology, an increase of 4.8 percentage points from 2015. Home health was the second most frequently selected specialty in both 2015 and 2017, though there was a decrease of 3.3 percentage points. See Table 64.

TABLE 64

Secondary Nursing Position Specialty—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 2,809.3)		2017 (<i>n</i> = 4,024.3)	
	<i>n</i>	Percent	<i>n</i>	Percent
Acute care/critical care	70.9	2.5%	120.5	3.0%
Adult health	63.8	2.3%	236.6	5.9%
Family health	---	---	88.6	2.2%
Anesthesia	0.0	0.0%	1.9	0.1%
Cardiology	---	---	13.1	0.3%
Community	37.3	1.3%	72.3	1.8%
Geriatric/gerontology	834.0	29.7%	1,388.2	34.5%
Home health	568.1	20.2%	679.5	16.9%
Maternal-child health/obstetrics	10.5	0.4%	21.4	0.5%
Medical-surgical	48.2	1.7%	73.9	1.8%
Nephrology	9.3	0.3%	27.8	0.7%
Occupational health	17.2	0.6%	27.3	0.7%
Oncology	1.6	0.1%	9.0	0.2%
Palliative care/hospice	77.8	2.8%	58.0	1.4%
Pediatrics	181.7	6.5%	378.6	9.4%
Neonatal	8.4	0.3%	1.7	0.0%
Perioperative	0.5	<0.1%	2.9	0.1%
Public health	21.6	0.8%	57.6	1.4%
Psychiatric/mental health/substance abuse	111.8	4.0%	159.5	4.0%
Rehabilitation	108.3	3.9%	184.2	4.6%
School health	39.8	1.4%	82.8	2.1%
Emergency/trauma	43.6	1.6%	48.4	1.2%
Women's health	10.5	0.4%	17.1	0.4%
Other—Clinical specialties	---	---	227.0	5.6%
Other—Non-clinical specialties	---	---	48.3	1.2%
Other	420.1	15.0%	---	---
Primary care	76.9	2.7%	---	---
Genetics	29.9	1.1%	---	---
Informatics	3.6	0.1%	---	---
Neurology/neurosurgical	3.4	0.1%	---	---
Orthopedic	6.7	0.2%	---	---
Radiology	1.8	0.1%	---	---
Urology	1.8	0.1%	---	---

(continued)

Secondary Nursing Position Specialty—LPN/LVN (continued)

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

Salary/Earnings

2016 pre-tax annual earnings from primary nursing position

The median pre-tax annual earnings for responding LPNs/LVNs increased from \$38,000 in 2015 to \$40,000 in 2017. Categorically, the percentage of respondents earning less than \$40,000 annually decreased by 6.6 percentage points, while all other earnings categories increased. The percentage of respondents making between \$40,000 and \$60,000 increased by 3.6 percentage points; those making between \$60,000 and \$80,000 increased by 1.9 percentage points; and those making more than \$80,000 increased by 0.9 percentage points. See Table 65.

TABLE 65

Annual Earnings—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 19,436.4)		2017 (<i>n</i> = 24,473.1)	
	<i>n</i>	Percent	<i>n</i>	Percent
Less than \$40,000	10,138.3	52.2%	11,190.3	45.7%
\$40,000 to \$59,999	7,088.3	36.5%	9,819.4	40.1%
\$60,000 to \$79,999	1,418.5	7.3%	2,243.9	9.2%
\$80,000 to \$99,999	174.6	0.9%	361.1	1.5%
\$100,000 or more	616.8	3.2%	857.2	3.5%

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Less than \$40,000	304,877	52.2%	255,845	45.7%
\$40,000 to \$59,999	213,157	36.5%	224,501	40.1%
\$60,000 to \$79,999	42,657	7.3%	51,303	9.2%
\$80,000 to \$99,999	5,250	0.9%	8,256	1.5%
\$100,000 or more	18,548	3.2%	19,626	3.5%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing. Salary includes overtime and bonuses, but does not include sign-on bonuses.

Earnings by gender and specialty

For all specialties, the median salary for males is higher than the median salary for females. LPNs/LVNs working in rehabilitation have the highest median salary overall, and LPNs/LVNs working in school health have the lowest median salary overall. See Table 66.

TABLE 66

Median Annual Earnings by Gender and Specialty—LPN/LVN

	Male	Female	Total
Acute care/critical care	\$52,000	\$43,000	\$43,200
	76	548	624
Adult health	\$50,000	\$42,000	\$42,000
	138	1,445	1,583
Family health	\$40,000	\$36,000	\$36,000
	54	1,841	1,895
Anesthesia	\$57,500	\$41,500	\$44,000
	2	13	15
Cardiology	\$58,500	\$39,950	\$40,000
	12	214	226
Community	\$45,000	\$44,000	\$44,000
	17	214	231
Geriatric/gerontology	\$50,000	\$45,000	\$45,000
	405	5,929	6,334
Home health	\$45,500	\$43,000	\$43,000
	117	1,380	1,497
Maternal-child health/obstetrics	\$72,000	\$41,000	\$41,185
	1	183	184
Medical-surgical	\$45,000	\$40,000	\$40,000
	42	586	628
Nephrology	\$50,000	\$42,000	\$42,000
	10	144	154
Occupational health	\$49,000	\$46,900	\$46,900
	12	149	161
Oncology	\$54,000	\$43,750	\$45,000
	9	127	136
Palliative care/hospice	\$46,000	\$45,000	\$45,000
	19	253	272
Pediatrics	\$44,000	\$40,000	\$40,000
	45	1,162	1,207
Neonatal		\$46,000	\$46,000
	0	12	12
Perioperative	\$45,500	\$41,000	\$41,000
	2	64	66
Public health	\$42,000	\$40,000	\$40,000
	21	193	214
Psychiatric/mental health/substance abuse	\$48,000	\$42,000	\$42,500
	129	974	1,103
Rehabilitation	\$50,000	\$48,000	\$48,000
	85	801	886
School health	\$42,500	\$28,000	\$28,000
	13	451	464
Emergency/trauma	\$42,340	\$41,900	\$42,000
	17	99	116
Women's health		\$37,000	\$37,000
	0	296	296
Total	\$48,000	\$42,000	
	1,401	19,683	

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

Earnings by highest education

LPNs/LVNs with baccalaureate and master's degrees have the highest median salaries. See Table 67

TABLE 67

Median Annual Earnings by Highest Education—LPN/LVN

	Median Salary	n
Vocational/practical certificate	\$42,000	16,750
Diploma	\$41,600	3,709
Associate degree	\$40,000	2,199
Baccalaureate degree	\$51,619	227

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

Earnings by state

Median earnings rose in most states. The highest median earnings were for LPNs/LVNs practicing in Alaska (\$52,000). The lowest median earnings were for LPNs/LVNs practicing in South Dakota (\$34,865), Alabama (\$35,000), Mississippi (\$35,000), and West Virginia (\$35,000). See Table 68.

TABLE 68

Median Annual Earnings in Primary Nursing Position by State(s) Where Currently Practicing—LPN/LVN

State	2015	2017	State	2015	2017
Alaska	\$50,000	\$52,000	North Dakota	\$35,000	\$37,000
Alabama	\$33,000	\$35,000	Nebraska	\$33,000	\$38,000
Arkansas	\$33,500	\$37,000	New Hampshire	\$42,000	\$45,500
Arizona	\$48,000	\$48,000	New Jersey	\$45,000	\$48,000
California	\$45,000	\$48,000	New Mexico	\$45,000	\$45,000
Colorado	\$42,000	\$45,000	Nevada	\$48,000	\$49,000
Connecticut	\$49,000	\$50,000	New York	\$40,000	\$45,000
District of Columbia	\$53,000	\$50,000	Ohio	\$34,000	\$36,000
Delaware	\$45,000	\$47,000	Oklahoma	\$35,000	\$37,000
Florida	\$37,000	\$40,000	Oregon	\$42,240	\$47,000
Georgia	\$36,000	\$39,800	Pennsylvania	\$39,000	\$40,320
Hawaii	\$45,000	\$46,000	Rhode Island	\$45,000	\$50,000
Iowa	\$34,640	\$36,000	South Carolina	\$37,124	\$40,000
Idaho	\$32,560	\$38,000	South Dakota	\$30,000	\$34,865
Illinois	\$40,000	\$40,000	Tennessee	\$34,000	\$36,000
Indiana	\$36,000	\$40,000	Texas	\$40,082	\$43,000
Kansas	\$35,000	\$39,000	Utah	\$36,000	\$41,000
Kentucky	\$35,000	\$40,000	Virginia	\$36,000	\$40,000
Louisiana	\$35,000	\$38,000	Vermont	\$37,128	\$42,000
Massachusetts	\$48,000	\$50,000	Washington	\$44,000	\$48,000
Maryland	\$45,000	\$50,000	Wisconsin	\$35,000	\$38,000
Maine	\$36,000	\$40,000	West Virginia	\$32,000	\$35,000
Michigan	\$35,000	\$40,000	Wyoming	\$40,000	\$40,500
Minnesota	\$33,000	\$36,750	American Samoa	\$30,000	\$30,000
Mississippi	\$35,000	\$35,000	Guam	\$34,000	\$32,000
Montana	\$36,260	\$37,440	Northern Mariana Islands	\$55,000	\$28,500
North Carolina	\$38,000	\$41,000	Virgin Islands	\$35,000	\$39,000

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

Earnings by years licensed and age

Similarly to RNs, there are steady increases in median salary as the number of years licensed increases, and little to no trend when LPNs/LVNs increase in age. See Table 69

TABLE 69

Median Annual Earnings by Years Licensed and Age—LPN/LVN

	Licensed 0-1 Year	Licensed 2-5 Years	Licensed 6-10 Years	Licensed 11+ Years	Total
< 30	\$31,000	\$35,000	\$38,200	\$39,500	\$35,000
	667	948	237	6	1,858
30-34	\$32,500	\$40,000	\$40,000	\$40,000	\$40,000
	225	668	594	295	1,782
35-39	\$34,780	\$40,000	\$41,000	\$41,000	\$40,000
	195	566	571	837	2,169
40-44	\$37,750	\$40,000	\$42,889	\$43,200	\$42,000
	148	431	522	1,213	2,314
45-49	\$39,603	\$40,000	\$43,000	\$44,000	\$43,000
	96	330	460	1,803	2,689
50-54	\$34,000	\$40,000	\$43,000	\$45,000	\$45,000
	74	248	377	2,240	2,939
55-59	\$38,400	\$41,721	\$40,463	\$45,000	\$44,000
	33	160	296	3,128	3,617
60-64	\$33,500	\$42,000	\$43,464	\$45,000	\$45,000
	9	69	119	3,152	3,349
≥ 65	\$27,000	\$39,500	\$40,000	\$45,000	\$45,000
	3	17	38	1,449	1,507
Total	\$33,120	\$40,000	\$41,000	\$45,000	
	1,450	3,437	3,214	14,123	

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

Telehealth Utilization

Percent of time providing telehealth

Responding LPNs/LVNs indicated that 54.2% were providing nursing services remotely in 2017 compared to 46.1% in 2015. Almost a quarter (23.2%) of LPN/LVN respondents were spending up to 25% of their time providing services remotely. The largest increase occurred among those LPNs/LVNs who were providing nursing services remotely from 76 to 100% of the time, increasing from 7.2% in 2015 to 12.7% in 2017. See Table 70.

TABLE 70

Percent of Time Providing Telehealth—LPN/LVN

Weighted Sample Values				
	2015 (n = 23,619.9)		2017 (n = 27,760.6)	
	n	Percent	n	Percent
Never	12,723.1	53.9%	12,715.8	45.8%
1 to 25%	5,496.6	23.3%	6,436.4	23.2%
26 to 50%	2,207.1	9.3%	2,821.3	10.2%
51 to 75%	1,490.6	6.3%	2,253.8	8.1%
76 to 100%	1,702.4	7.2%	3,533.3	12.7%

(continued)

Estimated Population Values				
	2015		2017	
	Freq	Percent	Freq	Percent
Never	382,606	53.9%	290,722	45.8%
1 to 25%	165,294	23.3%	147,157	23.2%
26 to 50%	66,373	9.3%	64,503	10.2%
51 to 75%	44,826	6.3%	51,529	8.1%
76 to 100%	51,195	7.2%	80,781	12.7%

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

Telehealth across state borders

Of those providing nursing services remotely, 43.9%, provided such services across state borders, compared to 33.8% in 2015. About one-third of LPN respondents (33.1%) provided such services to patients or clients across state borders up to 25% of the time. This represents a 5.6 percentage point increase from 2015. See Table 71.

TABLE 71

Percent of Time Providing Telehealth Across State Borders—LPN/LVN

Weighted Sample Values				
	2015 (n = 11,421.5)		2017 (n = 12,214.3)	
	n	Percent	n	Percent
Never	7,566.5	66.2%	6,849.9	56.1%
1 to 25%	3,140.4	27.5%	4,040.1	33.1%
26 to 50%	371.1	3.2%	622.9	5.1%
51 to 75%	180.4	1.6%	372.2	3.0%
76 to 100%	163.1	1.4%	329.3	2.7%

(continued)

Percent of Time Providing Telehealth Across State Borders—LPN/LVN (continued)

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

Telehealth across national borders

Only 11.8% of LPNs/LVNs providing remote services to patients or clients provide such services across national borders. In this survey, 7.3% of nurses reported doing so up to 25% of their time. See Table 72.

TABLE 72

Percent of Time Providing Telehealth Across National Borders—LPN/LVN

Weighted Sample Values				
	2015 (n = 11,089.2)		2017 (n = 11,117.1)	
	n	Percent	n	Percent
Never	10,201.8	92.0%	9,800.3	88.2%
1 to 25%	633.3	5.7%	807.0	7.3%
26 to 50%	129.0	1.2%	208.1	1.9%
51 to 75%	82.0	0.7%	189.0	1.7%
76 to 100%	43.1	0.4%	112.7	1.0%

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

Modes of communication used for telehealth

LPNs/LVNs providing services via phone or electronically to patients or clients were also asked to identify the modes of communication used. In this survey, 93.2% of LPNs/LVNs reported using a telephone to communicate with patients or clients, a 2.5 percentage point decrease from 2015; 28.9% reported using email to communicate with patients or clients, which is a decrease from the 29.5% who indicated so in 2015; and 22.5% reported using electronic messaging for patient/client communication in 2017 compared to 21.9% in 2015. See Table 73.

TABLE 73

Modes of Communication Used for Telehealth—LPN/LVN

Weighted Sample Values				
	2015 (<i>n</i> = 8,881.7)		2017(<i>n</i> = 11,164.0)	
	<i>n</i>	Percent	<i>n</i>	Percent
Electronic messaging	1,947.7	21.9%	2,510.8	22.5%
VoIP	187.7	2.1%	349.6	3.1%
Virtual ICU	84.9	1.0%	125.2	1.1%
Telephone	8,498.5	95.7%	10,405.0	93.2%
Email	2,622.2	29.5%	3,226.2	28.9%
Video call	207.4	2.3%	260.7	2.3%
Other	883.0	9.9%	1,027.2	9.2%

Note. Survey participants were asked to answer this question only if they were actively employed in nursing. Respondents were asked to select all that apply. VoIP = voice over Internet protocol; ICU = intensive care unit.

Discussion and Implications

Approximately 152,000 LPNs/LVNs were included in the sample; 40,272 responded (26.5%). These data provide the most recent and detailed information on characteristics of licensed LPNs/LVNs, 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 LPNs/LVNs; therefore, the present study was a critical addition to nursing workforce data.

In terms of diversity, 29% of responding LPNs/LVNs identified themselves as a minority, with the largest reporting minority group being Black/African American, at 18.5%. Of the respondents, 71% were White/Caucasian. This study's racial/ethnic diversity results are somewhat dissimilar to HRSA's (2017) nursing projections report by racial/ethnic diversity of the U.S. LPN/LVN workforce for 2014, which found a 61% White (non-Hispanic) LPN/LVN workforce and a 24% Black LPN/LVN workforce. Coffman, Bates, Chan, and Spetz (2015) reported a 61% White workforce, and the largest reporting minority group was Black/African American, at 24%. Concerning

gender diversity, 7.7% of the LPN/LVN respondents were male, which is somewhat similar to two other recent analyses of gender in the LPN/LVN workforce at 9% (Coffman, Bates, Chan, &, Spetz, 2015) and 7.6% (HRSA, 2017).

While 83% of respondents indicated a vocational/practical certificate was their entry qualification for their first U.S. nursing license, three-quarters (77.8%) of LPNs/LVNs did not receive higher degrees. This represents a slight increase of 1.8 percentage points from 2015 (76.0%). The vast majority (97.5%) were educated in the United States, which is consistent with results from the 2015 survey (98.5%). This is similar to Coffman and colleagues' (2015) finding that 76% did not hold a college degree in preparation to be an LPN/LVN. Of respondents, 14.3% indicated they held a diploma in nursing and another 7.3% held an associate degree in nursing as their highest level of nursing education. Almost a quarter of responding LPNs/LVNs indicated they had a non-nursing degree. Of those respondents, 68.8% reported an associate level non-nursing degree, 25.0% reported a baccalaureate level non-nursing degree, and an additional 6.2% reported a graduate-level non-nursing degree.

The most common care setting of LPN/LVN respondents was in nursing home/extended care (31.7%), followed by 14% in home health and 9.6% in hospitals. These percentages are similar to those found in the 2015 survey. Approximately 30.5% of LPNs/LVNs reported their primary practice specialty as geriatric/gerontology compared with 27.7% in the 2015 survey. These findings support a report by Coffman et al. (2015) that indicated long-term care employs more LPNs/LVNs than any other industry. In fact, they found the number of LPNs/LVNs working in long-term care increased from 258,670 in 2008 to 289,946 in 2013, an increase of 13%, while the number of LPNs/LVNs working in hospitals, outpatient care, and other sectors decreased by 20%. Over two-thirds (73.1%) of LPNs/LVNs' primary title was staff nurse. The current survey also found that 54.2% of LPNs/LVNs provided patient care services utilizing telehealth technologies, representing an increase of 8 percentage points. Of those, 43.9% were providing electronic services across state borders, compared to 33.8% in 2015.

Limitations

Limitations of the current study include a response rate of 26.5%, which was lower than the response rate for the similar sample of RNs (32.8%). A nonresponse bias analysis was conducted and indicated a slight overrepresentation of three distinct variables: White/Caucasian, female, and age 50 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 (30.0% 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 quite different samples; for example, the HRSA (2017) 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), and the Coffman et al. (2015) report relied on data from the American Community Survey and the Public Use Microdata Sample. Lastly, questions may be altered slightly from survey to survey, making comparisons potentially more challenging.

Conclusion

The current LPN/LVN workforce is expected to change in terms of the ratios of racial/ethnic minority groups and of men to women, though those changes are gradual. The LPN/LVN workforce is still largely composed of White/Caucasian women. Changes in the health care environment are especially relevant for LPNs/LVNs because where they are working is changing as more and more health care is delivered outside acute-care settings. Recent trends indicate strong demand for LPNs/LVNs in long-term care and community settings. The most recent HRSA projections on the supply and demand for LPNs/LVNs indicate there will be a shortage of 151,000 nurses by 2030, affecting all but 18 states (HRSA 2017). Of concern are the projections by Coffman et al. (2015) that indicate the LPN/LVN workforce in the United States is declining in size, from 675,918 in 2008 to 635,975 in 2013, a decrease of 6%. This decline is happening at a time when the supply and demand of LPNs/LVNs are likely to be affected by such factors as population growth, aging of the population, preferences for care delivery, and economic conditions.

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Appendices

APPENDIX A

Registered Nurse Nonresponse Analysis 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 are not 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. Variables in the data file came from both the Nursys database (i.e., the frame data) and 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, and ethnicity. The dependent variable in the analysis was whether or not the sampled RN completed the questionnaire.

Descriptive statistics

Of the 153,920 RNs in the sample frame, 48,704 responded, for a response rate of 31.6% (Table A1). Tables A2 and A3 show the frequencies for the categorical variables of gender and race/ethnicity. Table A4 shows the descriptive statistics for age. The only demographic information used for the following analyses come from Nursys, and are not the demographic data received from the survey.

TABLE A1

Response Rate—RN

	(<i>n</i> = 153,920)	Percent
Nonresponse	105,216	68.4%
Response	48,704	31.6%

TABLE A2

Gender of Sample—RN

	(<i>n</i> = 153,920)	Percent
Female	95,567	62.1%
Male	9,985	6.5%
Restricted/unknown	40,248	26.1%
Missing	8,120	5.3%

This response rate corresponds to the American Association for Public Opinion Research 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 for Public Opinion Research, n.d.).

TABLE A3

Race/Ethnicity of Sample—RN

	(<i>n</i> = 153,920)	Percent
White/Caucasian	35,518	23.1%
Black/African American	2,697	1.8%
Asian	1,499	1.0%
Hispanic	1,957	1.3%
Native American	356	0.2%
Pacific Islander	47	<0.1%
Other	905	0.6%
Restricted/unknown	40,248	26.1%
Missing	70,693	45.9%

TABLE A4

Age of Sample—RN

	<i>n</i>	Mean	Standard Deviation	Minimum	Maximum
Age	106,402	46.8	13.6	16	109

Bivariate Analysis

Tables A5 and A6 show the bivariate relationships between the demographic variables from the sample frame and whether or not the respondent completed the survey. Table A5 shows there were far fewer men in the database (9,985 compared to 95,567 women) and they were less likely to complete the survey (25.2% compared to 34.1% women).

TABLE A5

Response Rate by Gender—RN

	Completed Survey		
	<i>n</i>	No	Yes
Female	95,567	65.9%	34.1%
Male	9,985	74.8%	25.2%
Total	105,552	66.8%	33.2%

Note. $\chi^2(1, N = 105, 552) = 319.5, p < .001$.

TABLE A6

Response Rate by Race/Ethnicity—RN

Completed Survey			
Race/Ethnicity	<i>n</i>	No	Yes
White/Caucasian	35,518	66.3%	33.7%
African American	2,697	77.7%	22.3%
Hispanic	1,957	75.1%	24.9%
Asian	1,499	73.4%	26.6%
Native American	356	77.5%	22.5%
Pacific Islander	47	85.1%	14.9%
Other	905	74.3%	25.7%
Total	42,979	67.9%	32.1%

Note. $\chi^2(6, N = 42,979) = 266.0, p < .001$.

Table A7 displays the mean age of RNs of those who did and did not respond. On average, those who completed the survey were 5.4 years older than the nonrespondents. This relationship is statistically significant.

TABLE A7

Age by Response and Nonresponse—RN

Completed Survey		Age
No	<i>n</i>	70,748
	Mean	44.9
	Standard deviation	13
Yes	<i>n</i>	35,654
	Mean	50.4
	Standard deviation	14.1
Total	<i>n</i>	106,402
	Mean	46.8
	Standard deviation	13.6

Note. A t-test shows that the average age among those who did and did not respond is significantly different at the $<.001$ level.

Weights

In *The 2015 National Nursing Workforce Survey*, nonresponse adjustments were made for gender and age. For the 2017 survey, nonresponse adjustments were applied for gender and age in the jurisdictions for which data were obtained through the Nursys database. There was a high degree of missing race/ethnicity data in the sample frame (72.1% missing/unknown). Therefore, it was deemed impractical to use race/ethnicity for nonresponse adjustment even though there were differences in response rates by the category.

In order to create the combined age and gender (*Age × Gender*) nonresponse weights, 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 (16 to 49, 50 to 54, 55 to 59,

60 to 64, 65 or older, missing). These six age-groups were combined with the gender variable response categories (male, female, missing) to produce 18 *Age × Gender* 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:

$$\text{Age} \times \text{Gender Category Weight} = \frac{\text{Overall Survey Response Rate}}{\text{Age} \times \text{Gender Category Survey Response Rate}}$$

As an example of how this was calculated, there were 434 RNs in the sample frame whose gender was identified as male and whose age was missing. Out of these 434 RNs, 87 responded. The *Age × Gender* response rate for this category was determined to be $87/434 = .2005$. The overall survey response rate in jurisdictions for which data was obtained through the Nursys database was $37,548/113,672 = .3303$. So the *Age × Gender* weight for the age missing-gender male category was $.3303/.2005 = 1.648$.

Respondents in jurisdictions for which data were not obtained through the Nursys database were not weighted for age and gender and therefore all assigned an *Age × Gender* weight of 1.000. When the *Age × Gender* weights for each respondent are totaled, the sum comes to 48,704, the same as the total number of respondents. Table A8 displays the weights for the 18 *Age × Gender* categories in jurisdictions for which data were obtained through the Nursys database.

TABLE A8

Age × Gender Response Rate—RN

Age-Group	Gender		
	Invalid	Female	Male
16-49	1.387	1.225	1.610
50-54	1.053	0.974	1.210
55-59	0.872	0.822	1.033
60-64	0.791	0.709	0.904
65 or older	0.641	0.605	0.720
Age missing	1.120	1.315	1.648

In a similar manner, poststratification weights were constructed at the state level to adjust for differing sampling rates across states. These adjustments were made 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 427,892 RNs in California, out of which 1,020 responded. The California re-sponse per license rate was $1,020/427,892 = .0024$. The overall response per license rate was $48,704/4,639,548 = .0105$. So the poststratification weight for California was $.0105/.0024 = 4.375$.

Overall weights combined the *Age × Gender* and poststratification weights and were created by multiplying the *Age × Gender* and poststratification weights for each individual to create an initial

set of weights, adding the initial weights together, and slightly adjusting the weights so that they sum up to 48,704.

The overall weights 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 altering the degrees of freedom and thereby affecting significance tests. The *Age* × *Gender* weights, poststratification weights, and overall weights are summarized in Table A9.

TABLE A9					
Weight Summary Statistics—RN					
	<i>n</i>	Minimum	Maximum	Sum	Mean
Age by gender	48,704	0.605	1.648	48,704	1.000
Poststratification	48,704	0.088	4.792	48,704	1.000
Combined	48,704	0.053	5.932	48,704	1.000
<i>Note.</i> Combined weight was used in reporting results.					

APPENDIX B

Licensed Practical Nurse/Licensed Vocational Nurse Nonresponse Analysis and Sample Weighting

As with the RNs, a formal nonresponse bias analysis was conducted of the LPN/LVN data following the close of the survey. Variables in the data file came from both the Nursys® database (i.e., the frame data) and 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, and race/ethnicity. The dependent variable in the analysis was whether or not the sampled LPN/LVN completed the questionnaire.

Preliminary analysis

Of the 158,502 LPNs/LVNs in the sample frame, 40,272 responded, for a response rate of 25.4% (Table B1). Tables B2 and B3 show the frequencies for the categorical variables. Table B4 shows the descriptive statistics for age.

TABLE B1

Response Rate—LPN/LVN

	(<i>n</i> = 158,502)	Percent
No	118,230	74.6%
Yes	40,272	25.4%

TABLE B2

Gender of Sample—LPN/LVN

	(<i>n</i> = 158,502)	Percent
Female	92,886	58.6%
Male	8,550	5.4%
Restricted/unknown	46,215	29.2%
Missing	10,851	6.8%

TABLE B3

Race/Ethnicity of Sample—LPN/LVN

	(<i>n</i> = 158,502)	Percent
White/Caucasian	33,233	21.0%
Black/African American	6,188	3.9%
Asian	724	0.5%
Hispanic	2,823	1.8%
Native American	523	0.3%
Pacific Islander	71	<0.1%
Other	847	0.5%
Restricted/unknown	46,215	29.2%
Missing	67,878	42.8%

TABLE B4

Age of Sample—LPN/LVN

	<i>n</i>	Mean	Standard Deviation	Minimum	Maximum
Age	102,825	47.3	13.2	16	96

Bivariate analysis

Tables B5 and B6 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 (8,550 compared to 92,886 women) and they were less likely to complete the survey (19.6% compared to 27.9% women).

TABLE B5

Response Rate by Gender—LPN/LVN

	<i>n</i>	Completed Survey	
		No	Yes
Female	92,886	72.1%	27.9%
Male	8,550	80.4%	19.6%
Total	101,436	72.8%	27.2%

Note. $\chi^2(1, N = 101,436) = 275.6, p < .001$.

From Table B6, nurses who identified as White/Caucasian were most likely to respond, with a response rate of 29.0%. Those who responded other and Pacific Islander nurses were least likely to respond, with response rates of 19.0% and 18.3%.

TABLE B6

Response Rate by Race/Ethnicity—LPN/LVN

Race/Ethnicity	<i>n</i>	Completed Survey	
		No	Yes
White/Caucasian	33,233	71.0%	29.0%
African American	6,188	79.8%	20.2%
Asian	724	75.8%	24.2%
Hispanic	2,823	78.1%	21.9%
Native American	523	75.5%	24.5%
Pacific Islander	71	81.7%	18.3%
Other	847	81.0%	19.0%
Total	44,409	73.0%	27.0%

Note. $\chi^2(6, N = 44,409) = 287.1, p < .001$.

Table B7 displays the mean age of LPNs/LVNs by response or nonresponse. On average, those who completed the survey were

5.6 years older than the nonrespondents. This relationship is statistically significant.

TABLE B7

Age by Response and Nonresponse—LPN/LVN

Completed Survey			
No	Mean	45.8	
	Standard deviation	12.8	
	<i>n</i>	74,736	
Yes	Mean	51.4	
	Standard deviation	13.5	
	<i>n</i>	28,089	
Total	Mean	47.3	
	Standard deviation	13.2	
	<i>n</i>	102,825	

Note. A t-test shows that this relationship is significant at the <.001 level.

Weights

In *The 2015 National Workforce Survey of Registered Nurses* report, nonresponse adjustments were made for gender and age. Due to the high degree of missing race/ethnicity data in the sample frame (72.0% missing/unknown), it was still deemed impractical to use that category for nonresponse adjustment.

In order to create the combined age and gender (*Age × Gender*) nonresponse weights, 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 (16 to 49, 50 to 54, 55 to 59, 60 to 64, 65 or older, missing). These six age-groups were combined with the gender variable response categories (male, female, missing) to produce 18 *Age × Gender* 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:

$$\text{Age} \times \text{Gender Category Weight} = \frac{\text{Overall Survey Response Rate}}{\text{Age} \times \text{Gender Category Survey Response Rate}}$$

An example of how this was calculated can be found in the RN nonresponse sample weighting section.

Respondents in jurisdictions for which data was not obtained through the Nursys database were not weighted for age and gender and therefore all assigned an *Age × Gender* weight of 1.000. When the *Age × Gender* weights for each respondent are totaled, the sum comes to 40,272, the same as the total number of respondents. Table B8 displays the weights for the 18 *Age × Gender* categories in jurisdictions for which data was obtained through the Nursys database.

TABLE B8

Age × Gender Response Rate—LPN/LVN

Age-Group	Missing/Invalid	Gender	
		Female	Male
18-49	1.551	1.289	1.796
50-54	1.004	0.952	1.268
55-59	0.916	0.788	1.051
60-64	0.754	0.671	0.901
65 or older	0.643	0.595	0.733
Age missing	1.097	1.187	1.647

In a similar manner, poststratification weights 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 state's sample frame 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 that combined the *Age × Gender* and poststratification weights were created by multiplying the *Age × Gender* and poststratification weights for each individual to create an initial set of weights, adding the initial weights together, and slightly adjusting the weights so that they sum up to 40,272.

The overall weights simply adjust the distribution across states, age, and gender, but sum to the actual number of LPNs/LVNs in the subset of completed responses. They can be applied when analyzing relationships between variables without the effect of artificially altering the degrees of freedom and thereby affecting significance tests. The *Age × Gender* weights, poststratification weights, and overall weights are summarized in Table B9.

TABLE B9

Weight Summary Statistics—LPN/LVN

	<i>n</i>	Minimum	Maximum	Sum	Mean
Age by gender	40,272	0.595	1.796	40,272	1.000
Poststratification	40,272	0.127	8.916	40,272	1.000
Combined	40,272	0.074	8.696	40,272	1.000

Note. Combined weight was used in reporting results.

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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.

Unless indicated, select one answer per question.

- ☐ Vocational/Practical certificate–nursing
- ☐ Diploma–nursing
- ☐ Associate degree–nursing
- ☐ Baccalaureate degree–nursing
- ☐ Master's degree–nursing
- ☐ Doctoral degree–nursing (PhD)
- ☐ Doctoral degree–nursing (DNP)

- ☐ Certified Nurse Practitioner
- ☐ Clinical Nurse Specialist
- ☐ Certified Registered Nurse Anesthetist
- ☐ Certified Nurse Midwife
- ☐ Not credentialed as any of the above

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Employment Information

14. What is your employment status? (Select all that apply)

- ☐ Actively employed in nursing or in a position that requires a nurse license full-time
- ☐ Actively employed in nursing or in a position that requires a nurse license part-time
- ☐ Actively employed in nursing or in a position that requires a nurse license on a per-diem basis
- ☐ 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 on a per-diem basis
- ☐ Working in nursing only as a volunteer
- ☐ Unemployed, seeking work as a nurse
- ☐ Unemployed, not seeking work as a nurse
- ☐ Retired

15. If unemployed, please indicate the reasons. (Select all that apply)

- ☐ Taking care of home and family
- ☐ Disabled
- ☐ Inadequate salary
- ☐ School
- ☐ Difficulty in finding a nursing position
- ☐ Other

***If you are actively employed in nursing, please answer the remaining questions. If you are not actively employed in nursing, you have completed the survey.**

16. In how many positions are you currently employed as a nurse?

- ☐ 1
- ☐ 2
- ☐ 3 or more

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

HOURS	

18. Please indicate the zip code of your primary employer.

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 2016 pre-tax annual earnings from your primary nursing position. Include overtime and bonuses, but exclude sign-on bonuses.

EARNINGS									
\$									
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

.00 per year

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

- ☐ Hospital
- ☐ Nursing Home/Extended Care
- ☐ Assisted Living Facility
- ☐ Home Health
- ☐ Hospice
- ☐ Correctional Facility
- ☐ School of Nursing
- ☐ Public Health
- ☐ Dialysis Center
- ☐ Community Health
- ☐ School Health Service
- ☐ Occupational Health
- ☐ Ambulatory Care Setting
- ☐ Insurance Claims/Benefits
- ☐ Policy/Planning/Regulatory/Licensing Agency
- ☐ Other (Please specify)

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

- ☐ Consultant
- ☐ Nurse Researcher
- ☐ Nurse Executive
- ☐ Nurse Manager
- ☐ Nurse Faculty/Educator
- ☐ Advanced Practice Registered Nurse
- ☐ Staff Nurse
- ☐ Case Manager
- ☐ Other-Health Related (Please specify)

- ☐ Other-Not Health Related (Please specify)

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

- ☐ Acute Care/Critical Care
- ☐ Adult Health
- ☐ Family Health
- ☐ Anesthesia
- ☐ Cardiology
- ☐ Community
- ☐ Geriatric/Gerontology
- ☐ Home Health
- ☐ Maternal-Child Health/Obstetrics
- ☐ Medical Surgical
- ☐ Nephrology
- ☐ Occupational Health
- ☐ Oncology
- ☐ Palliative Care/Hospice
- ☐ Pediatrics
- ☐ Neonatal
- ☐ Perioperative
- ☐ Public Health
- ☐ Psychiatric/Mental Health/Substance Abuse
- ☐ Rehabilitation
- ☐ School Health
- ☐ Emergency/Trauma
- ☐ Women's Health
- ☐ Other—Clinical specialties (Please specify)

☐ Other—Non-clinical specialties (Please specify)

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

- ☐ No Secondary Practice Position
- ☐ Hospital
- ☐ Nursing Home/Extended Care
- ☐ Assisted Living Facility
- ☐ Home Health
- ☐ Hospice
- ☐ Correctional Facility
- ☐ School of Nursing
- ☐ Public Health
- ☐ Dialysis Center
- ☐ Community Health
- ☐ School Health Service
- ☐ Occupational Health
- ☐ Ambulatory Care Setting
- ☐ Insurance Claims/Benefits
- ☐ Policy/Planning/Regulatory/Licensing Agency
- ☐ Other (Please specify)

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

- ☐ No Secondary Practice Position
- ☐ Consultant
- ☐ Nurse Researcher
- ☐ Nurse Executive
- ☐ Nurse Manager
- ☐ Nurse Faculty/Educator
- ☐ Advanced Practice Registered Nurse
- ☐ Staff Nurse
- ☐ Case Manager
- ☐ Other—Health Related (Please specify)

☐ Other—Not Health Related (Please specify)

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

- ☐ No Secondary Practice Position
- ☐ Acute Care/Critical Care
- ☐ Adult Health
- ☐ Family Health
- ☐ Anesthesia
- ☐ Cardiology
- ☐ Community
- ☐ Geriatric/Gerontology
- ☐ Home Health
- ☐ Maternal-Child Health/Obstetrics
- ☐ Medical Surgical
- ☐ Nephrology
- ☐ Occupational Health
- ☐ Oncology
- ☐ Palliative Care/Hospice
- ☐ Pediatrics
- ☐ Neonatal
- ☐ Perioperative
- ☐ Public Health
- ☐ Psychiatric/Mental Health/Substance Abuse
- ☐ Rehabilitation
- ☐ School Health
- ☐ Emergency/Trauma
- ☐ Women's Health
- ☐ Other—Clinical specialties (Please specify)

☐ Other—Non-clinical specialties (Please specify)

Telehealth

26. What percentage of your work 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%

27. 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%

28. 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%

29. Please select the mode(s) of communication you use to provide nursing services, or communicate with, a remote patient or client. (Select 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)
☐ Voice over internet protocol (VoIP) (Skype, FaceTime)
☐ Virtual ICU (also known as: tele-ICU, remote ICU, eICU)
☐ Telephone
☐ Email
☐ Video call
☐ Other

30. Please indicate the states in which you hold an active license to practice as an RN or LPN: (Select all that apply)

☐ 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	

31. Please indicate the states in which you are currently practicing as an RN or LPN: (Select all that apply)

☐ 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	

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