



Nursing Education and Training: Data from the 2022 NSSRN

March 2024

Nursing is the nation's largest health care profession, with an estimated 4,349,377 actively licensed registered nurses (RNs) as of December 31, 2021, up from 3,957,611 on December 31, 2017. Between December 31, 2017, and December 31, 2021, 592,979 new RNs received their first RN license and joined the workforce.

The National Sample Survey of Registered Nurses (NSSRN) surveyed a nationally representative sample of approximately 125,000 RNs and APRNs in the United States on a variety of topics, including nurses' employment characteristics. More than 49,000 nurses responded to the survey and those results were extrapolated to estimate population totals. For details on the NSSRN, see the end of this brief.

About the National Center for Health Workforce Analysis

The National Center for Health Workforce Analysis provides analysis to inform health workforce policy by expanding and improving the data available on the health workforce, projecting the supply and demand for health workers, and disseminating workforce data to the public.

For more information, visit the [Health Workforce Analysis](#) webpage.

Key takeaways include:

- A bachelor's degree is the most common degree for initial U.S. licensing, with nearly 2.0 million RNs (45.4% of the workforce) indicating that they entered the workforce with a bachelor's degree. In the previous NSSRN, 39.3% of RNs reported that they entered the workforce with a bachelor's degree.
- 40.2% of the nursing workforce (1,750,277 RNs) have completed a second degree or advanced certificate since initially entering the workforce.
- For nearly 2.0 million RNs who entered the workforce with a bachelor's degree, 342,678 (17.3%) went on to obtain a master's degree and 56,464 (2.9%) obtained a doctorate.
- RNs finance their education in a variety of ways, including using their own income or savings, taking out a student loan, obtaining a scholarship, or using employment benefits. 3.4 million RNs (78.2% of the workforce) indicated that they paid for at least part of their education using personal income and savings or money from family and friends.
- Nearly 2.0 million RNs (45.2% of the workforce) indicated that they used federally assisted student loans to finance at least part of their initial nursing degree, while 16.9% indicated that they used other (non-federal) student loans. In the previous survey, 38.3% of RNs used federally assisted student loans while 16.2% used other (non-federal) student loans.
- 2.2 million RNs (50.8% of the workforce) indicated that they had borrowed money to finance either their initial nursing degree, an additional nursing degree, or both. As of December 31, 2021, 64.7% of those RNs still had remaining unpaid debt.
- More than 3.0 million RNs (70.4% of the workforce) indicated that they were employed in a health-related job prior to completing their first RN degree. Nursing aide or nursing assistant was the most common health-related job held. This trend is consistent with prior surveys.
- 694,723 RNs (16.0% of the workforce) indicated that they were licensed as a licensed practical nurse (LPN) or licensed vocational nurse (LVN) prior to becoming an RN.

- 901,763 RNs (20.7% of the workforce) had completed an RN residency or transition-to-practice program. 93.3% of the RNs who completed a residency or transition-to-practice program were assigned a preceptor during the program.
- Many RNs reported obtaining certifications related to their specialization or in basic life support and resuscitation.
- RNs also reported receiving ongoing training on a number of topics, including emergency preparedness and a variety of care delivery models.

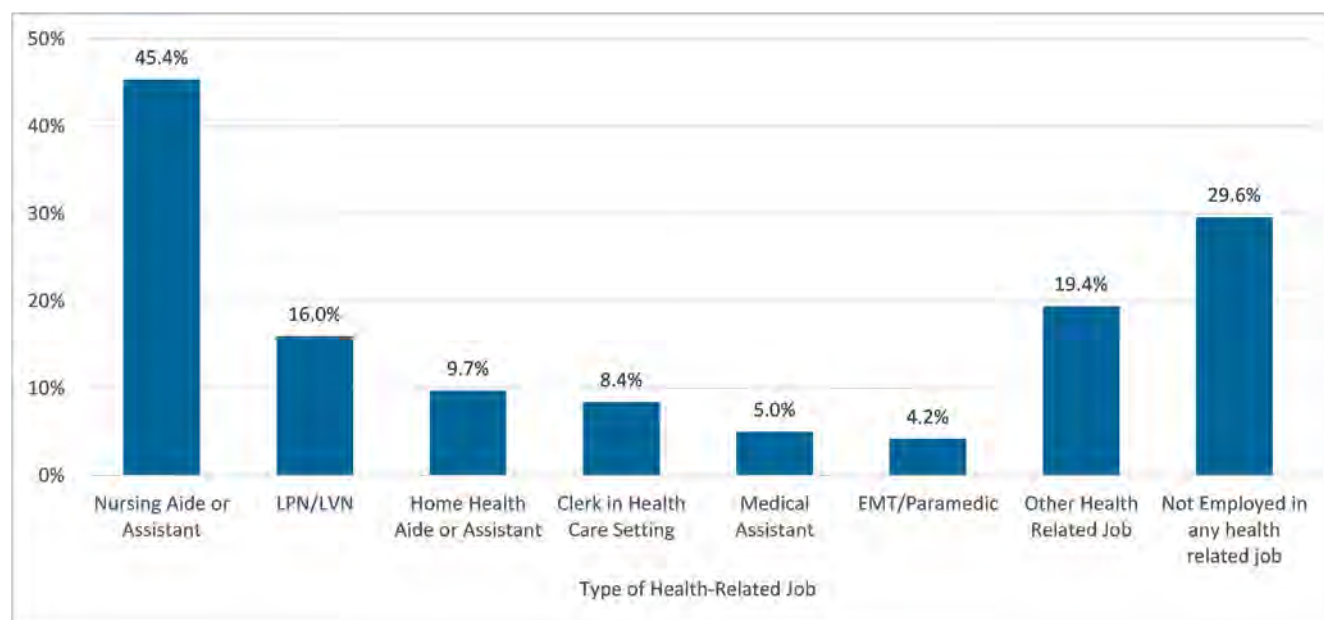
Prenursing Education

There are many pathways to a nursing career. More than 37% of all nurses (1.6 million RNs) obtained another post-secondary degree prior to beginning their first RN degree. Bachelor's and associate degrees were the most common pre-nursing degrees obtained. 51.7% of newly graduated RNs over the past five years entered the workforce with a bachelor's degree. The share of nurses who reported having a bachelor's degree for an initial degree increased by 6.2 percentage points, from 39.3% in 2017 to 45.4% in 2021, while the share of RNs entering the nursing workforce with a graduate degree (master's or doctorate) increased from 0.9% to 2.6%. While 7.8% of the overall nursing workforce who had a diploma for their initial nursing degree, only 1.8% of new entrants did. These results indicate a shift in the workforce towards higher educational attainment.

RNs enter the workforce through a variety of educational pathways, often combined with prior experience in health-related jobs. Entry into the nursing profession may include earning a diploma, an associate degree in nursing (ADN), a Bachelor of Science in Nursing (BSN) degree, an accelerated-second-bachelor's degree or an entry-level master's degree for students who already have degrees in non-nursing disciplines.¹

More than 70.4% of the workforce (3.1 million RNs) indicated that they were employed in a health-related job prior to completing their first RN degree. As shown in **Figure 1**, the most common health care jobs held by RNs prior to completing a nursing degree include nursing aide or nursing assistant (45.4% of all RNs), LPN or LVN (16.0% of all RNs), and home health aides and assistants (9.7% of all RNs). 16.0% of the workforce (694,723 RNs) indicated that they were licensed as an LPN or LVN prior to becoming an RN, up from 13.5% of the workforce in 2017.

Figure 1. Health-Related Jobs Held Prior by RNs to Completing Their Initial Nursing Degree



Note: Percentages sum to more than 100% because some RNs held multiple health-related jobs prior to becoming an RN. Percentages are based on the total workforce of an estimated 4,349,377 RNs.

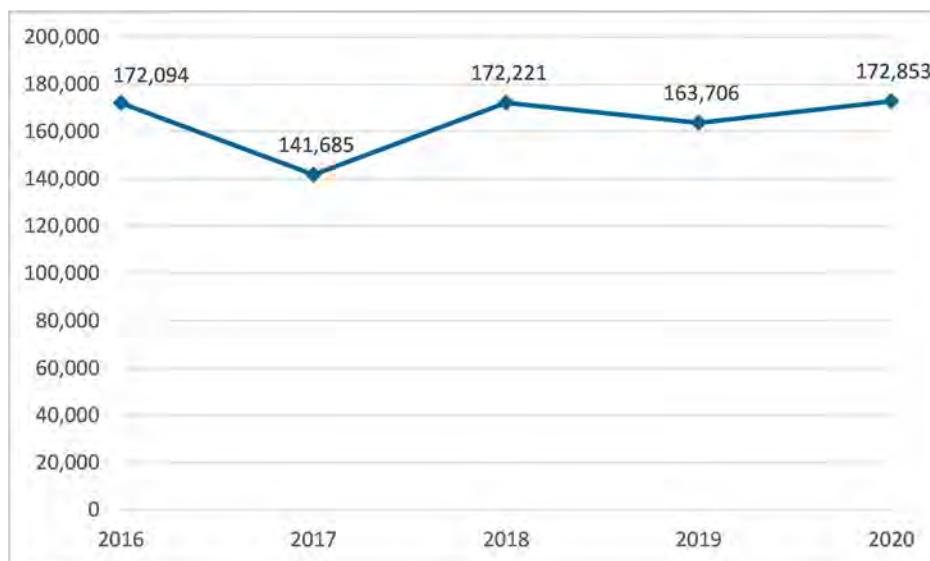
Source: [2022 National Sample of Registered Nurses](#).

¹ See, for example, NursingEducation.org. Paths to Becoming a Registered Nurse. Updated January 16, 2024. Accessed January 23, 2024. <https://nursingeducation.org/resources/paths-to-becoming-a-registered-nurse/>.

New Nursing Graduates

In 2020, 172,853 new RNs received their first RN license, a 5.6% increase compared to 2019 (**Figure 2**). Overall, 18.9% of the workforce (822,559 RNs) received their first nursing license between 2016 and 2020.

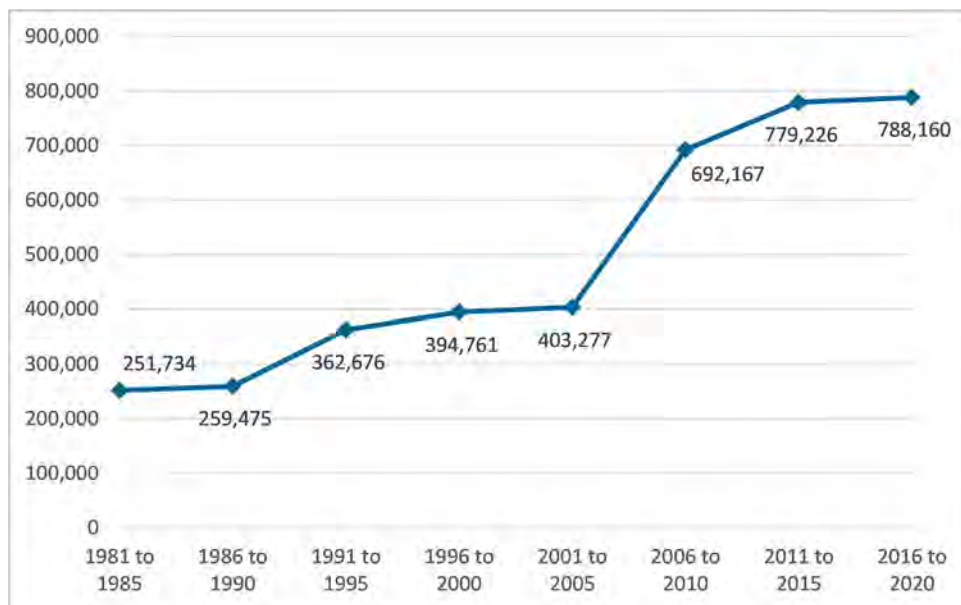
Figure 2. Number of RNs Who Received Their First RN License, 2016 to 2020



Source: [2022 National Sample of Registered Nurses](#).

Figure 3 provides data on the number of new graduates from RN programs since 1980 in five-year increments. After rapid growth between 2001 and 2008, growth in the number of new RN graduates has slowed.

Figure 3. Number of New Graduates from RN Programs, 1981 to 2020



Source: [2022 National Sample of Registered Nurses](#).

Recent graduates were more likely to have completed a portion of their degree program online or via distance learning. While 18.6% of RNs who completed their initial nursing degree between 2000 and 2015, completed part of their degree online; that increased to 46.4% of RNs who completed their degree between 2016 and 2020 completed part of their degree online (**Table 1**).

Table 1. Percent of Initial RN Degree Completed Online or Through Distance Learning

Percent Completed Online	RNs Who Graduated Between 2016 and 2020	RNs Who Graduated Between 2000 and 2015
0%	53.6%	81.4%
1% to 49%	39.4%	14.9%
50% to 99%	5.8%	2.6%
100%	1.2%	1.1%

Note: 1,944,478 RNs graduated between 2000 and 2015 and 788,160 graduated between 2016 and 2020.

Source: [2022 National Sample of Registered Nurses](#).

Of those who completed their degrees between 2016 and 2020, 46.4% of new RN graduates (or 365,601 RNs) completed an RN residency or transition-to-practice program. This percentage is considerably higher than for the overall workforce, suggesting that residency programs are more common now. Of the new RN graduates between 2016 and 2020 who completed an RN residency or transition-to-practice program, 93.1% had a preceptor assigned during their program.

Nursing Degrees

Many nurses choose to earn additional nursing degrees or certificates after completing their first nursing degree and obtaining licensure. In 2021, 40.2% (1.7 million) of all RNs in the nursing workforce have completed a second degree or advanced certificate since initially entering the workforce, up from 35.0% in 2017. For example, 44.8% of the 337,487 RNs who entered the workforce with a diploma indicated that they had received one or more additional nursing degrees (**Table 2**). Most of these nurses reported that their highest nursing degree was a bachelor's (24.3%). Similarly, of the 1,921,377 RNs who entered the workforce with an associate degree 29.1% went on for a bachelor's degree. For the 1,976,426 RNs who entered with a bachelor's, 17.3% went on to obtain a master's and 2.9% a doctorate.

Table 2. Highest Nursing Degree Obtained, by Initial Nursing Degree as of December 31, 2021

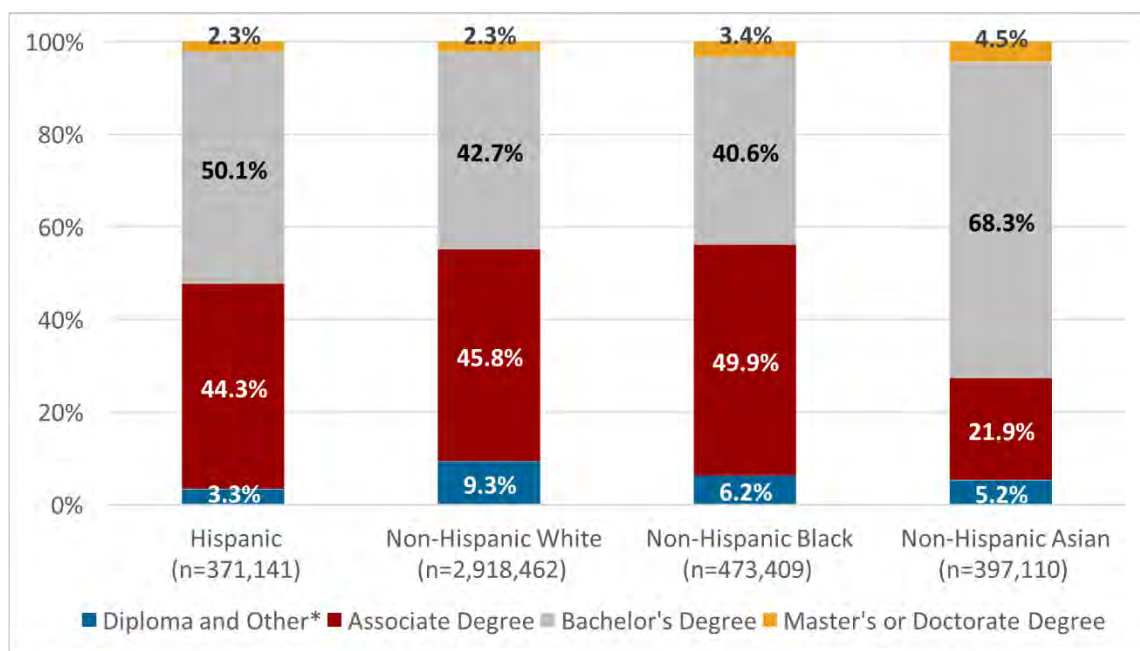
Initial Degree	Highest Degree				
	Diploma and Other*	Associate Degree	Bachelor's Degree	Master's Degree	Doctorate (Ph.D. or DNP)
Diploma and Other*	186,127 (55.2%)	1,061 (0.3%)	81,800 (24.3%)	57,823 (17.2%)	10,676 (3.2%)
Associate Degree		1,118,435 (58.2%)	559,645 (29.1%)	215,354 (11.2%)	27,944 (1.5%)
Bachelor's Degree			1,577,294 (79.8%)	342,678 (17.3%)	56,454 (2.9%)
Master's Degree				100,490 (97.1%)	2,959 (2.9%)
Doctorate (Ph.D. or DNP)					10,639 (100%)

*Includes direct degree programs.

Source: [2022 National Sample of Registered Nurses](#).

Educational attainment also varies by demographic characteristics. For example, non-Hispanic Asian RNs are the group with the largest share of nurses who entered the workforce with a bachelor's degree (68.3%), followed by Hispanic RNs with 50.1% of nurses who entered with a bachelor's degree (**Figure 4**). Non-Hispanic Whites had the greatest share of nurses who entered the workforce with a diploma or other degree.

Figure 4. Initial Nursing Degree by Race/Ethnicity

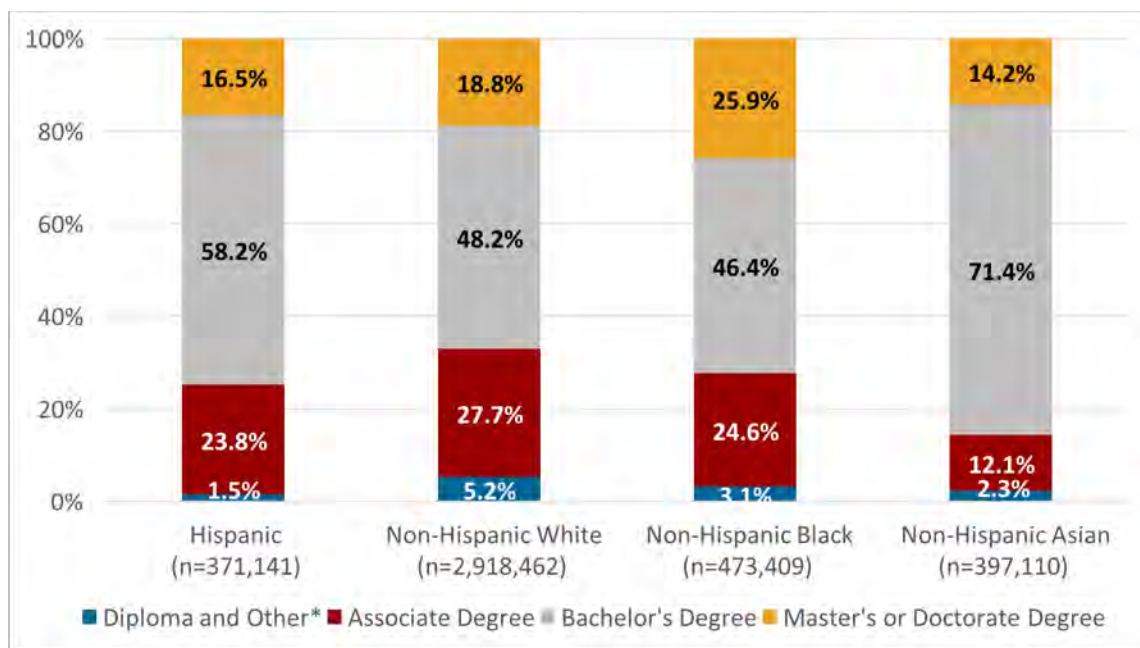


*Includes direct degree programs.

Source: [2022 National Sample of Registered Nurses](#).

In contrast, non-Hispanic Black or African American RNs were the largest group who reported having a the master's or doctorate as their highest nursing degree (25.9% - **Figure 5**). Most non-Hispanic Asian RNs reported having a bachelor's as their highest nursing degree (71.4%).

Figure 5. Highest Nursing Degree by Race/Ethnicity

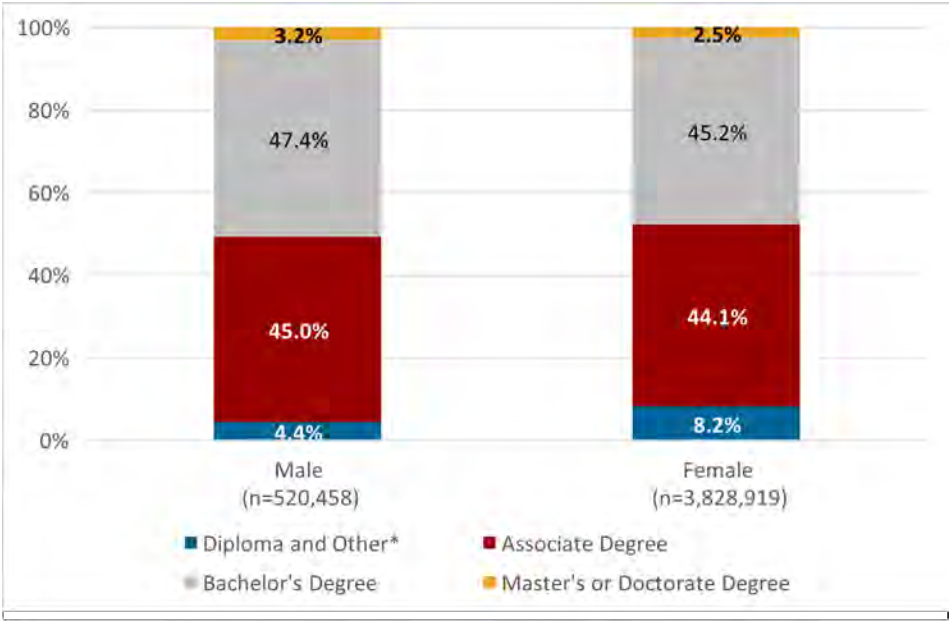


*Includes direct degree programs.

Source: [2022 National Sample of Registered Nurses](#).

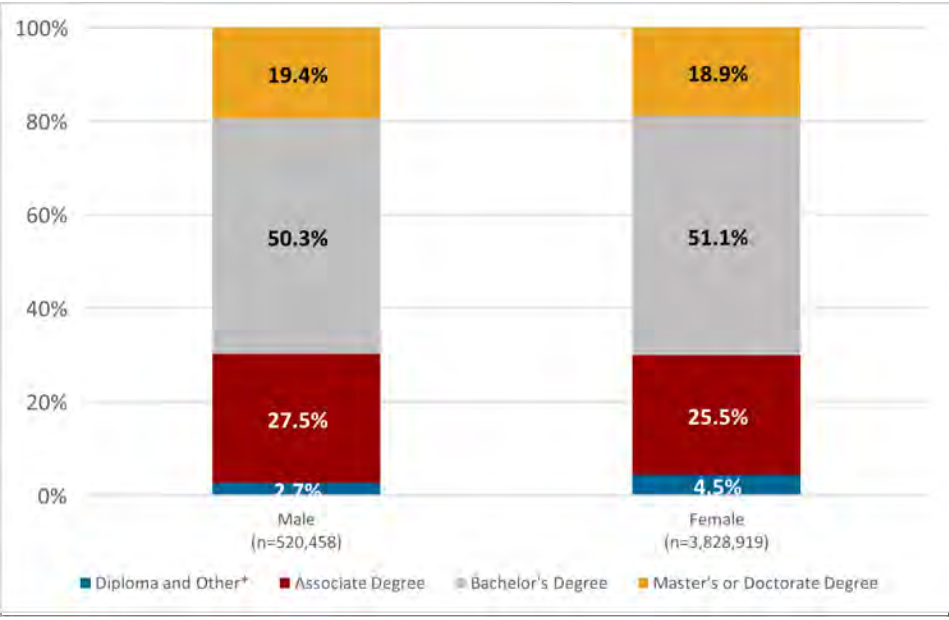
The distribution of initial nursing degrees (**Figure 6**) and highest nursing degrees (**Figure 7**) are similar for male and female nurses. A slightly higher percent of male nurses entered the workforce with a bachelor's or higher degree. Female RNs were more likely than male RNs to have entered the workforce with a diploma (8.2% compared to 4.4%).

Figure 6. Initial Nursing Degree by Sex



* Includes direct degree programs.
Source: [2022 National Sample of Registered Nurses](#).

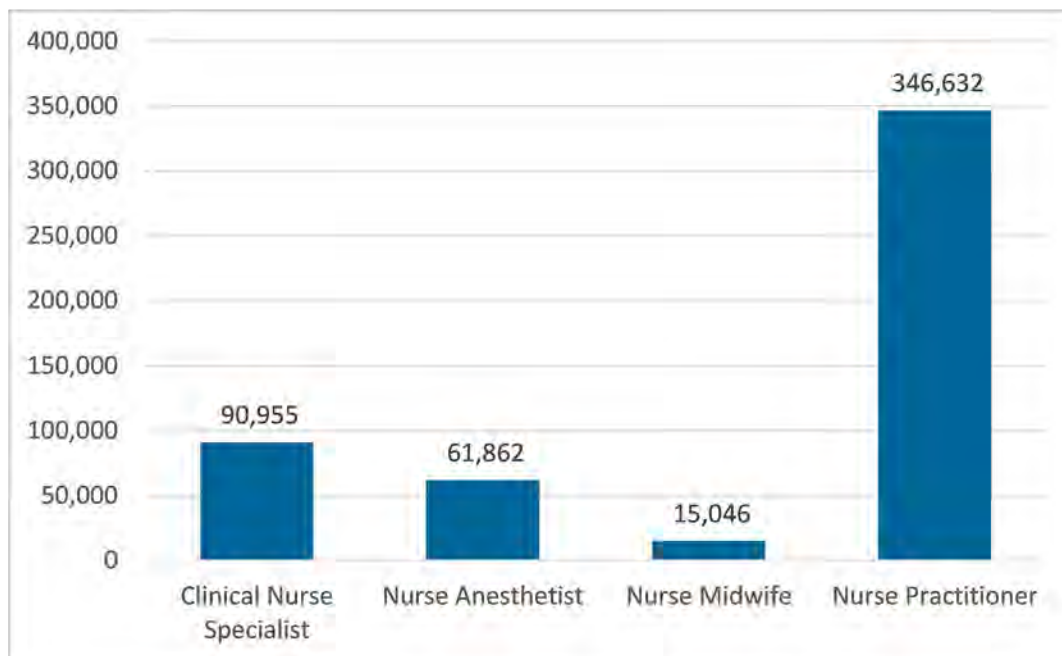
Figure 7. Highest Nursing Degree by Sex



* Includes direct degree programs.
Source: [2022 National Sample of Registered Nurses](#).

When RNs obtained an additional nursing degree, 28.6% of them obtained a degree or certification that qualifies them as an advanced practice registered nurse (APRN). Overall, 501,013 RNs (or 11.5% of the nursing workforce) have completed an additional degree or certification that qualifies them as an APRN. **Figure 8** provides a breakdown of APRN training, by type of APRN qualification. Nurse practitioner (NP) was the most common type of APRN qualification earned, with 346,632 nurses reporting that they have completed an additional nursing degree or program that qualifies them as an NP.

Figure 8. Qualification as an APRN, by Type of APRN Qualification



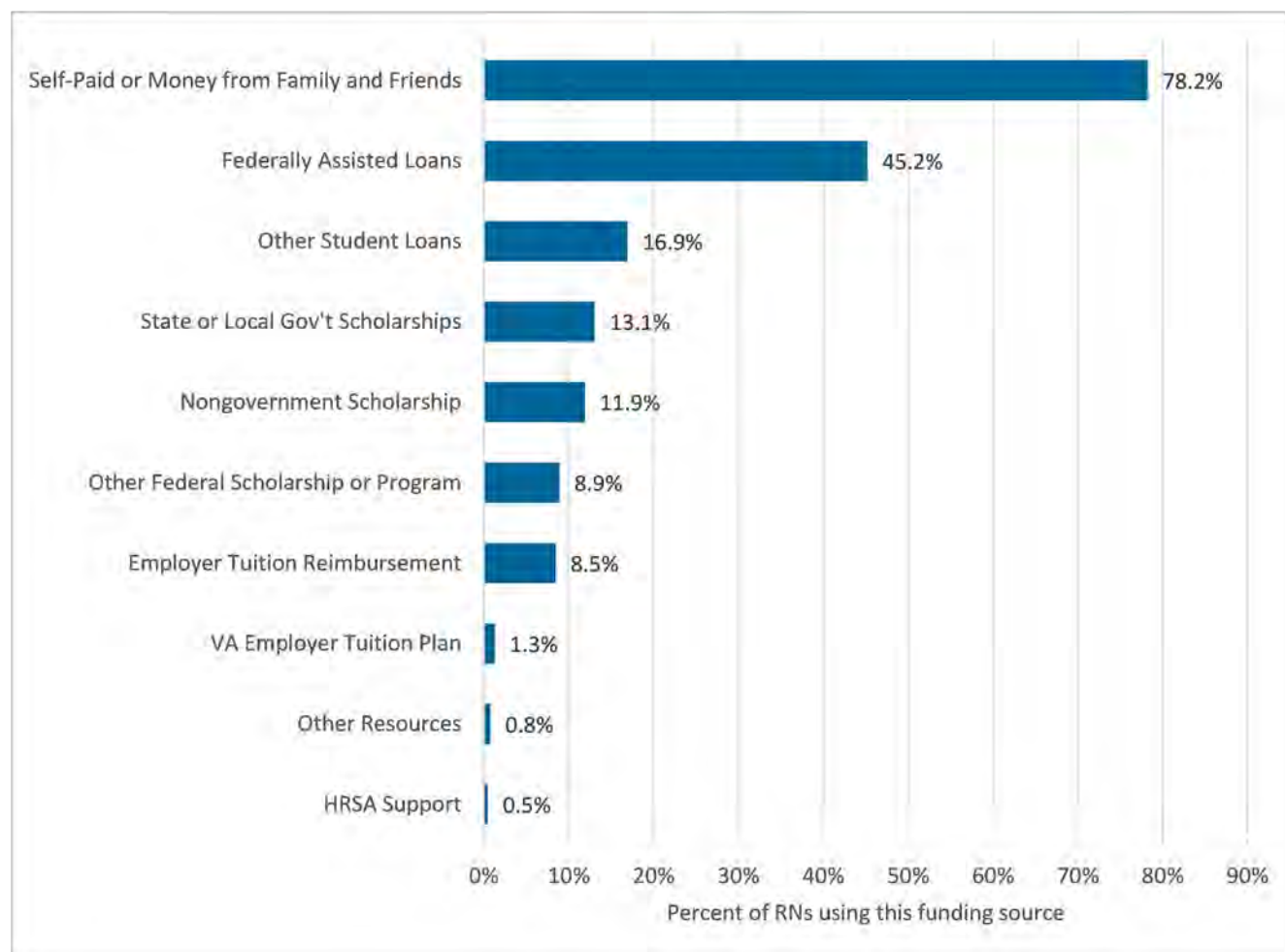
Note: Adds to more than the total number of nurses with an APRN qualification since some RNs have multiple degrees that qualification as different types of APRNs.

Source: [2022 National Sample of Registered Nurses](#).

Financing of Nursing Education

Nurses can finance their education in a variety of ways, including using their own income or savings, taking out a student loan, obtaining a scholarship, or using employment benefits. **Figure 9** provides information on the sources of financing used by RNs to finance their initial nursing degree. The most common source of financing was self-pay, including gifts and loans from family and friends with 3.4 million RNs (78.2% of the workforce) indicated that they paid for at least part of their education using personal income and savings or money from family and friends.

Figure 9. Sources of Financing for Initial Nursing Degree



Note: Percentages add to greater than 100% since RNs can use multiple sources to finance their nursing degrees. Percentages are based on the total workforce of 4,349,377 RNs.

Source: [2022 National Sample of Registered Nurses](#).

1,966,658 RNs (45.2% of workforce) indicated that they used federally assisted student loans to finance at least part of their initial nursing degree, while 735,895 RNs (16.9% of the workforce) indicated that they used other (non-federal) student loans. Other common sources of funding include state and local government scholarships (13.1% of RNs), nongovernment scholarships (11.9%), federal scholarships and other federal programs (8.9%), and employer tuition reimbursement programs (8.5%).

20,369 nurses (or 0.5% of all RNs in the workforce) indicated that they had received support from the U.S. Department of Health and Human Services' Health Resources and Services Administration (HRSA) to help finance their nursing education.

In the 2018 NSSRN, the most common sources of finance for an initial nursing degree were self-pay (68.5%), federally-assisted student loans (38.3%), and other types of student loans (16.2%). In 2018, 0.6% of respondents indicated that they had received support from HRSA to help finance their nursing education.

As shown in **Figure 9**, many RNs use student loans to help finance their nursing education. In fact, 2.2 million nurses (50.8% of all RNs) indicated that they had borrowed money to finance either their initial nursing degree, an additional nursing degree, or both. As of December 31, 2021, 1.4 million RNs (64.7% of those who took out student loans) still had remaining unpaid debt (**Table 3**).

**Table 3. RNs with Outstanding Student Loan Debt as of December 31, 2021,
By Amount of Debt Outstanding**

Amount of Debt Remaining	Number of RNs	Percent of RNs with Student Loans
\$0	778,447	35.3%
\$1 to \$10,000	235,876	10.7%
\$10,001 to \$20,000	260,345	11.8%
\$20,001 to \$30,000	212,141	9.6%
\$30,001 to \$40,000	149,143	6.8%
\$40,001 to \$50,000	128,656	5.8%
\$50,001 to \$60,000	102,768	4.7%
\$60,001 to \$70,000	85,753	3.9%
\$70,001 to \$80,000	67,923	3.1%
\$80,001 to \$90,000	37,863	1.7%
\$90,001 or more	149,114	6.8%

Source: [2022 National Sample of Registered Nurses](#).

Nearly a quarter of RNs who took out student loans have between \$1 and \$20,000 of debt remaining, while 6.8% have more than \$90,000 of unpaid debt remaining. In fact, more than 20% of the RNs who used student loans have more than \$50,000 of unpaid debt outstanding. Based on the lower bounds of the ranges above, this data implies the total amount of student loan debt outstanding for RNs is approximately \$48 billion.

Certifications and Training

In addition to college degrees, many RNs will obtain certifications related to their specialization or in basic life support and resuscitation. As of December 31, 2021, 81.9% of the RN workforce had earned at least one skill-based certification. The most common certifications among RNs were life support, resuscitation, trauma nursing, and critical care (**Table 4**) with 70.3% of the workforce indicating that they have a certification in life support and 37.1% are certified in resuscitation.

Table 4. Skill-Based Certifications for RNs as of December 31, 2021

Training	Count of RNs	Percent of All RNs
Life support	3,057,849	70.3%
Resuscitation	1,614,002	37.1%
Trauma nursing	297,102	6.8%
Critical care	172,720	4.0%
Emergency medicine/nursing	157,076	3.6%
Oncology	75,417	1.7%
Medical-surgical nursing	61,196	1.4%
Case management	53,242	1.2%
Perioperative nursing	46,319	1.1%
All other certifications	596,178	13.7%

Note: Percentages sum to more than 100% because RNs may have multiple certifications. Percentages are based on the total workforce of 4,349,377 RNs.

Source: [2022 National Sample of Registered Nurses](#).

RNs also receive ongoing training on a variety of topics, including emergency preparedness. **Table 5** provides information on the emergency preparedness training received by RNs during 2021. During 2021, more than half of RNs (53.7%) received training in infectious disease epidemics, while 37.1% received training for natural disasters, 30.3% received training for chemical attacks or accidents, and 26.4% received training for biological accidents or attacks.

Table 5. Emergency Preparedness Training for RNs in 2021

Training	Count of RNs	Percent of All RNs
Infectious disease epidemics	2,333,676	53.7%
Natural disaster	1,614,847	37.1%
Chemical accident or attack	1,318,620	30.3%
Biological accident or attack	1,146,869	26.4%
Nuclear or radiological accident or attack	774,517	17.8%
Other public health emergencies	1,520,824	35.0%

Note: Percentages sum to more than 100% because RNs may have multiple certifications. Percentages are based on the total workforce of 4,349,377 RNs.

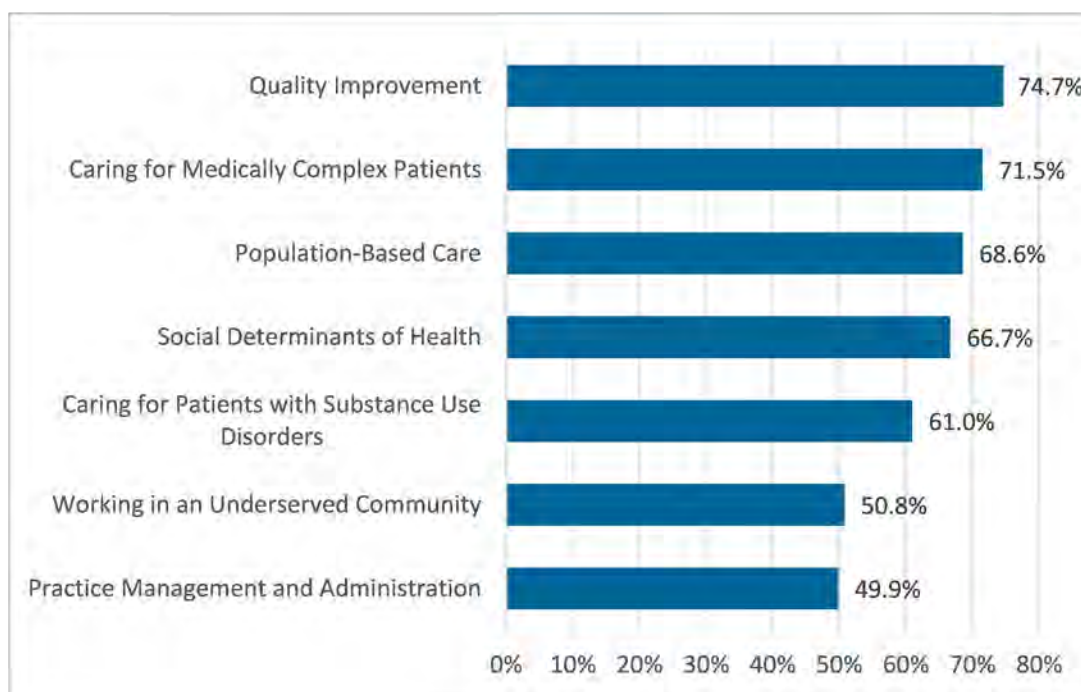
Source: [2022 National Sample of Registered Nurses](#).

RNs also received training on a variety of other topics, including alternative care delivery methods, population-based care, and general health care topics. Training in care delivery is common, with 89.2% of the workforce receiving training in patient-centered care (care that is responsive to patient preferences, needs and values, and ensures that patient values guide clinical decisions), 86.3% receiving training in evidenced-based care (care

that utilizes best practices and clinical decisions supported by scientific research and clinical expertise), and 80.5% receiving training in team-based care (comprehensive health services by at least two health professionals working collaboratively to provide safe, quality care). Nearly 2.4 million RNs (or 68.3% of the workforce) received training in value-based care (care that improves health outcomes relative to the cost of care) in 2021.

Similarly, 68.6% of RNs received training on population-based health care (care that focuses on the health status and needs of a target population possessing similar health concerns or characteristics) during 2021 (**Figure 10**). Other common training topics include quality improvement (74.7% of the workforce), caring for medically complex patients (71.5% of the workforce), and the social determinants of health (66.7% of the workforce).

Figure 10. Other Common Training for RNs in 2021



Note: Percentages are based on the total workforce of 4,349,377 RNs.

Source: [2022 National Sample of Registered Nurses](#).

Precepting

A preceptor is an experienced clinician who supervises nursing students during their clinical rotations. Preceptors are meant to “support, teach, and mentor” new nurses as they transition to the workforce.² As of December 31, 2021, 901,763 RNs (20.7% of the workforce) had completed an RN residency or transition-to-practice program. 93.3% of the RNs who completed a residency or transition-to-practice program were assigned a preceptor during the program. In other words, 841,326 RNs were assigned a preceptor while transitioning to the workforce.

The share of RNs who are assigned a preceptor during their transition to work is likely to continue to grow over time. More than half (53.3%) of RNs who completed a residency or transition-to-practice program completed it after 2014, suggesting that these programs have become more common over time.

Most RNs who have completed a residency or transition-to-practice program entered the workforce with a bachelor’s degree (**Table 6**). In fact, 26.8% of all RNs who reported having a bachelor’s degree as their initial nursing degree have completed an RN residency or transition-to-practice program (530,524 out of 1,976,426 RNs).

Table 6. Number of RNs Who Have Completed an RN Residency or Transition-to-Practice Program, by Initial Nursing Degree

Initial RN Degree	Count of RNs Completing a Residency	Percent
Diploma and other	21,950	2.4%
Associate degree	321,934	35.7%
Bachelor's degree	530,524	58.8%
Master's degree	26,447	2.9%
Doctorate (Ph.D. or DNP)	908	0.1%
Total/All Degrees	901,763	100.0%

Source: [2022 National Sample of Registered Nurses](#).

Similarly, RNs whose highest RN degree was a bachelor’s degree accounted for the majority (62.5%) of RNs who have completed an RN residency or transition-to-practice program, followed by nurses with an associate degree (18.5%) and RNs with a master’s degree (15.3%) (**Table 7**).

Table 7. Number of RNs Who Have Completed an RN Residency or Transition-to-Practice Program, by Highest Nursing Degree

Highest RN Degree	Count of RNs Completing a Residency	Percent
Diploma and other ¹	11,855	1.3%
Associate degree ²	166,399	18.5%
Bachelor's degree	563,200	62.5%
Master's degree ³	137,902	15.3%
Doctorate (Ph.D. or DNP)	22,407	2.5%
Total/All Degrees	901,763	100.0%

¹ includes direct degree programs. ² Includes LPN-to-RN programs. ³ Includes post-master’s certificates.

Source: [2022 National Sample of Registered Nurses](#).

² NurseJournal.org. Ask a Nurse: What Should I Expect from My Nursing Preceptorship? Updated July 10, 2023. Accessed January 25, 2024. <https://nursejournal.org/ask-a-nurse/what-should-i-expect-from-my-nursing-preceptorship/>.

As mentioned above, preceptors are generally experienced RNs who are assigned to assist students as they transition to work. In 2021, nearly 2.0 million RNs (56.7% of employed RNs) indicated that they spent time in their primary nursing position teaching, precepting, or orienting students or new hires. The share of nurses who have spent time teaching, precepting, or orienting students or new hires has increased since 2017, when 53.3% of employed RNs indicated that they spent time teaching, precepting, or orienting students. In 2021, 40.9% of RNs who spent time teaching or precepting spent less than 10% of their time on teaching or precepting students (**Table 8**). Approximately 75% of RNs who spent time teaching or precepting spent less than 20% of their time on these activities.

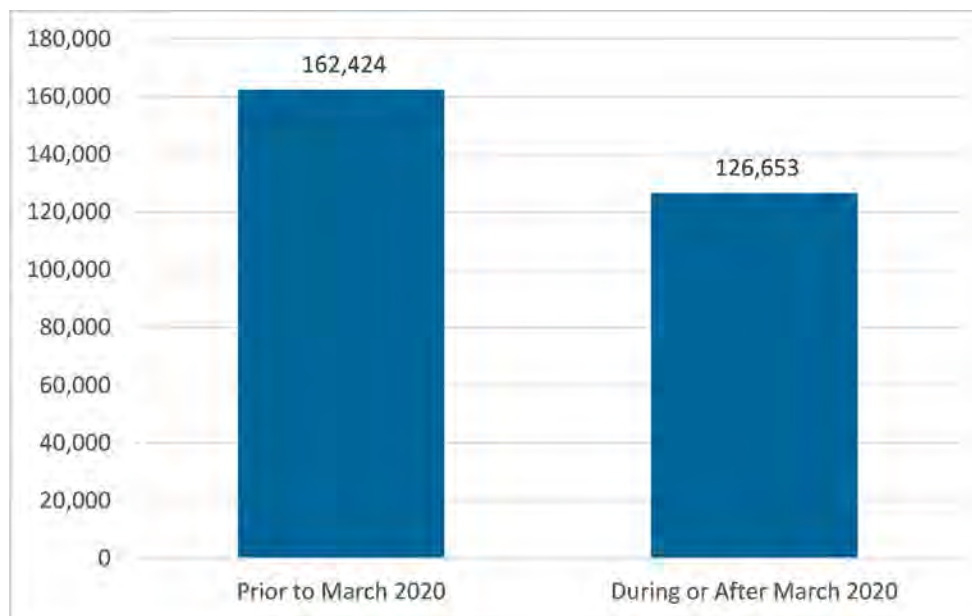
Table 8. Percent of Time Spent on Teaching, Precepting, or Orienting Students and New Hires for RNs Who Engaged in These Activities, 2021

Percent of Time Spent	Count of RNs	Percent
< 10%	806,018	40.9%
10% to 19%	698,321	35.4%
20% to 29%	274,220	13.9%
30% to 59%	118,153	6.0%
60% to 99%	50,333	2.6%
100%	24,800	1.3%
Any Time	1,971,845	100.0%

Source: [2022 National Sample of Registered Nurses](#).

In addition, 210,964 NPs (or 59.4% of all licensed NPs) indicated that they have precepted NP students at some point in their career, 162,424 NPs indicated they had served as a preceptor at some point prior to March 2020, and 126,653 NPs indicated that they had precepted students at some point during or after March 2020 (**Figure 11**).

Figure 11. Nurse Practitioners Who Have Precepted Students, Before and After March 2020

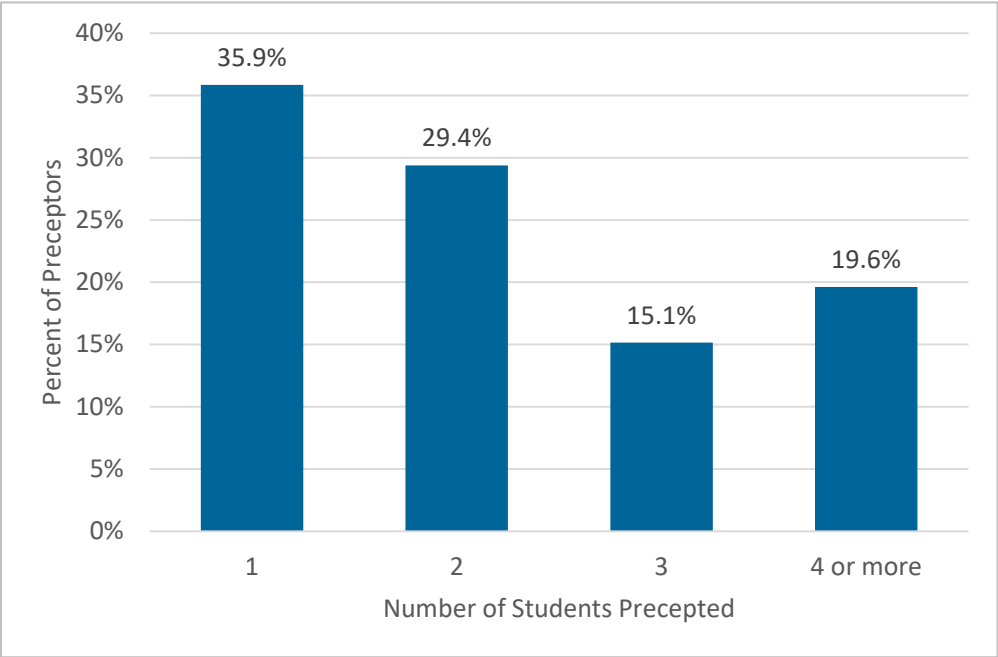


Source: [2022 National Sample of Registered Nurses](#).

These numbers include 78,114 NPs who precepted both before and after March 2020. This may suggest that 48,539 NPs (38.3%) of the NPs who have precepted students after March 2020 are new to precepting.

Approximately 51.2% of NPs who have precepted students (107,968 NPs) indicated that they precepted students in 2021. Most NPs who precepted in 2021 (65.2%) precepted one or two NP students (**Figure 12**). In contrast, just 19.6% of preceptors precepted four or more students in 2021. Approximately 16.1% of these NPs received some form of remuneration for their time.

Figure 12. Number of NP Students Precepted by an NP Preceptor in 2021



Source: [2022 National Sample of Registered Nurses](#).

About the Data

The National Sample Survey of Registered Nurses (NSSRN) is the longest running survey of registered nurses (RNs) in the United States. Since its inaugural assessment in 1977, the NSSRN has provided educators, health workforce leaders, and policymakers with key details and developments of the nursing workforce supply. Considered the cornerstone of nursing workforce data, this comprehensive exploration provides information on the demographics, educational attainment, licenses and certifications, and employment characteristics of RNs in the United States.

In collaboration with the U.S Census Bureau, the National Center for Health Workforce Analysis administered the 11th NSSRN data collection to a nationally representative sample of approximately 125,000 beginning in December 2022. From December 2022 to April 2023, a total of 49,234 registered nurses completed the survey via a web form or a paper questionnaire with an unweighted response rate of 40.6% (41.1% weighted). The numbers presented in this brief represent an extrapolation of the responses to the overall nursing workforce. This survey gathered data from participants with active RN licenses from all U.S. states revealing a comprehensive look into the RN and Advanced Practice Registered Nurse (APRN) workforce. To learn more about the NSSRN or to download data and reports, visit [National Sample Survey of Registered Nurses \(NSSRN\)](#).