

2020 Neonatal Nurse Practitioner Workforce Survey

An Executive Summary

Barbara Snapp, DNP, APRN, NNP-BC; Tiffany A. Moore, PhD, RN; Carol Wallman, DNP, APRN, NNP-BC; Suzanne Staebler, DNP, APRN, NNP-BC, FAANP, FAAN

ABSTRACT

Background: The National Association of Neonatal Nurse Practitioners (NANNP) partnered with the National Certification Corporation (NCC) to invite all NCC-certified neonatal nurse practitioners (NNPs) to participate in a national survey on NNP compensation, workforce environment, and satisfaction measures.

Purpose: To understand the current NNP compensation, benefits, and workforce environment.

Methods: An anonymous survey was sent to 6558 board-certified NNPs with 845 respondents.

Results: Most of the survey respondents (92%) are in direct patient care (n = 804) with 83% (n=703) working full time (35 hours or more). Those NNPs with less than 5 years' experience had a mean salary of \$119,000 per year while more experienced NNPs (30-plus years) earned a mean salary of \$134,000 per year. Half of the NNPs (51%) report high satisfaction with their scope of practice and role in their organization. Distribution of NNPs throughout the workforce is sub-optimal, with 67% of the administrators indicating they do not have enough NNPs.

Implications for Practice and Research: The 2020 NANNP workforce survey collected information on NNP compensation, benefits, work environment, and experiences. It identified areas of satisfaction, such as compensation with bonuses and pay increases, and acknowledged areas needing improvement such as the lack of diversity within the profession. Utilizing the results of the survey will help create a more diverse, well-educated, and informed workforce to ensure culturally competent NNPs remain relevant within the healthcare system.

Key Words: benefits, compensation, neonatal nurse practitioner, survey

In 2020, board-certified neonatal nurse practitioners (NNPs) accounted for a little more than 2% of the estimated 325,000 licensed nurse practitioners in the United States,¹ based on data from the National Certification Corporation (NCC; R. Bissinger, oral communication, January 11, 2021). The National Association of Neonatal Nurse Practitioners (NANNP) and the NCC have partnered since 2014 to gather survey data to understand the workforce environment and scope of practice for this subset of highly specialized advanced practice nurses. Herein, we present results from the survey distributed in early 2020 and describe NNP demographics, practices, compensation, and benefits based on national and regional data. The report will also compare results with data obtained from the 2014 and 2016 surveys.

Author Affiliations: Children's National Hospital, Washington, District of Columbia (Dr Snapp); University of Nebraska Medical Center, Omaha (Dr Moore); Loretto Heights School of Nursing, Regis University, Denver, Colorado (Dr Wallman); and Nell Hodgson Woodruff School of Nursing, Emory University, Atlanta, Georgia (Dr Staebler).

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Correspondence: Barbara Snapp, DNP, APRN, NNP-BC, Children's National Hospital, 111 Michigan Ave, NW, Washington, DC 20010 (bsnappdnp@gmail.com).

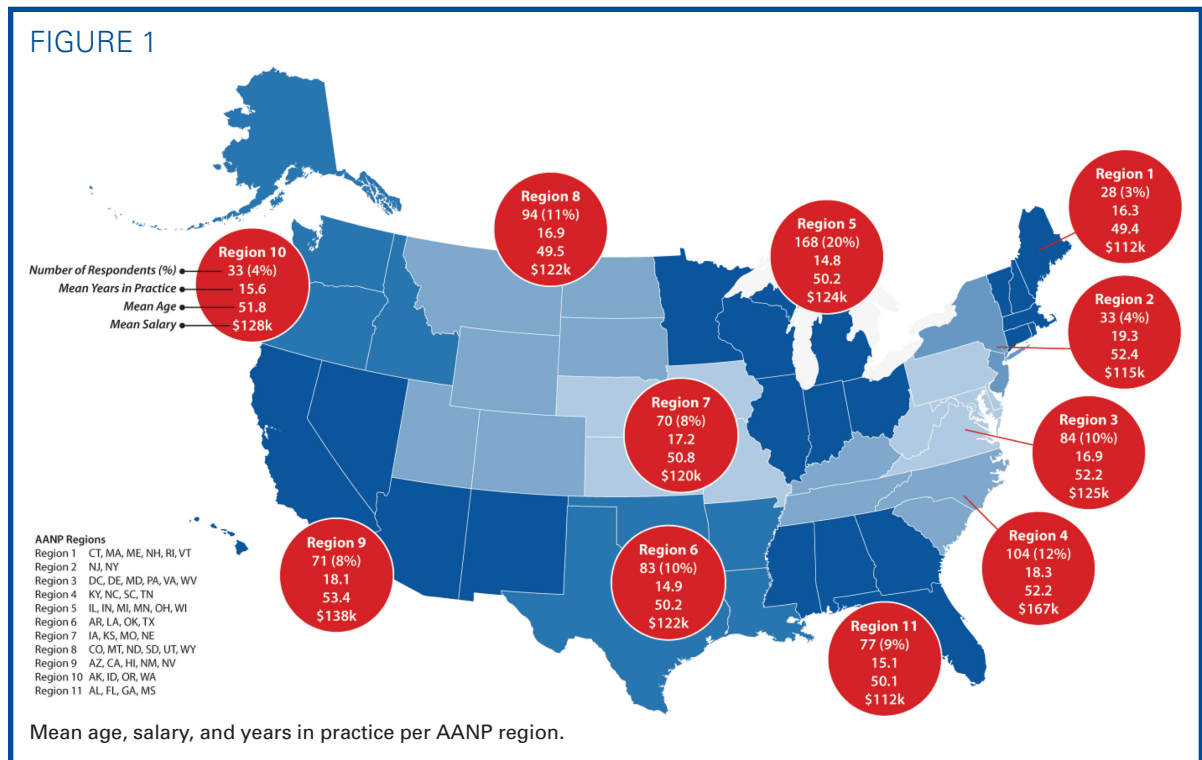
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METHODS

The NANNP Council designed an electronic survey and used NCC's database to send to 6558 certified NNPs in the United States. The survey was available from March 11, 2020, until April 17, 2020. Each recipient was given an exclusive access number and was asked several questions before starting the survey to avoid duplication and ensure qualification. NNPs with direct clinical care in newborn nursery, level II, III, and IV neonatal intensive care units (NICUs), primary care/outpatient settings, and transport NNPs were all directed to the clinical portion of the survey. Respondents selecting faculty/dean/director roles received additional faculty-appropriate questions. Respondents indicating NNP/advanced practice registered nurse (APRN) coordinator/manager/administrator roles were directed to an administration section of the survey. Recipients reporting primarily clinical nurse specialist (CNS)/educator roles were excluded because the CNS specialty has its own practice directives.

Descriptive statistics were used to analyze the data. Portions of the data were further aggregated based on the 11 regions utilized by the American Association of Nurse Practitioners (AANP).²



RESULTS

The 2020 survey respondents ($n = 845$) accounted for 12.88% of eligible participants. (Note: The World Health Organization declared the coronavirus a pandemic on March 11, 2020, which may have influenced the survey response rate).³ The majority of NNP respondents were female (96%), with an average age of 51 years. Figure 1 provides further analysis of the data for mean age and years of experience as an NNP for each AANP region. Most of the respondents (89%) self-identified as non-Hispanic White, with an additional 2% non-Hispanic Black, 3% Hispanic, and 6% responding “other.” Ninety-five percent reported they provide direct clinical care, and 78% reported they are full-time employees working more than 35 hours per week. When queried about primary work site, respondents reported they are employed by a multihospital network ($n = 257$; 32%), a children’s hospital system ($n = 183$; 22%), an academic medical center ($n = 131$; 16%), a multinational investor-owned healthcare services company ($n = 101$; 12%), or a private practice/hospital ($n = 123$; 15%). When questioned whom the NNP reported to, 65% of the respondents chose “medicine,” while 31% chose “nursing,” and 5% listed “other.” Additional data on age, years of experience as an NNP, education level, and primary nursery unit from 2014, 2016, and 2020 surveys can be found in Table 1.

Practice Environment

Table 1 also describes primary shifts covered, preferred shifts, 24-hour shift downtime, and

mandatory overtime/on-call from 2014, 2016, and 2020 surveys. Shift preference according to the level of care for the 2020 survey was further analyzed for level III/IV units.⁴ Of the respondents primarily working in a level III unit, 49% worked 24-hour shifts, 31% worked rotating shifts, and 15% worked day shifts. For NNPs primarily practicing in level IV units, 52% reported working rotating shifts, 23% worked 24-hour shifts, and 19% worked day shifts. Of note, 63% of the respondents reported working more than their scheduled number of hours, averaging an additional 248 hours annually, or 20 extra hours a month.

Compensation

Based on the responses from the 2020 survey, NNPs earned a mean of \$109,000 per year for early-career practitioners (≤ 5 years), while the experienced NNPs (30 plus years) earned an average of \$134,000 per year. NNP respondents with doctoral degrees ($n = 121$) reported earning \$7,000 above the average salary, while respondents in administrative roles ($n = 33$) earned \$9000 more than the average salary. See Table 2 for further delineation of these data.

NNP respondents with a higher level of income reported a higher level of satisfaction with their careers. Satisfaction was also higher for NNPs who receive bonuses and annual pay increases. Of the total respondents, 49% ($n = 412$) reported that they did not receive any type of differential as part of their compensation package. For the respondents who received differential pay, 32% received a night

TABLE 1. General Demographics Over Time

	2014	2016	2020
NCC number available for survey	5267	5433	6558
Number of respondents; response rate (%)	1300 (25)	1100 (20)	845 (13)
Age			
<35	9%	11%	9%
35-39	11%	12%	12%
40-49	23%	24%	23%
50-59	41%	36%	29%
≥60	15%	17%	28%
Years of experience as NNP			
≤10	41%	44%	38%
11-20	31%	26%	25%
21-30	28% (>21)	24%	26%
>30	...	7%	12%
Mean years of experience	14	14	16.5
Education level			
Certificate	11%	9%	7%
Master's degree	81%	78%	79%
Doctor of nursing practice	5%	9%	12%
Doctor of philosophy	2%	2%	2%
Primary unit			
Level I	25%	1%	2%
Level II	39%	8%	11%
Level III	74%	58%	46%
Level IV	32%	33%	41%
Shifts covered			
Days only	17%	16%	16%
Nights only	6%	4%	5%
Rotating	45%	42%	37%
24 h	50%	51%	41%
Preferred shift			
Days only	...	42%	40%
Nights only	...	6%	5%
Rotating	...	11%	7%
24 h	...	40%	39%
24-h shift downtime	(n = 767)	N/A	(n = 447)
None	70%	...	77%
≤2 h	9%	...	6%
3-6 h	16%	...	7%
>6 h	4%	...	6%
Overtime/on-call mandatory			
Yes	...	21%	9%
No	...	79%	74%
Varied based on staffing	17%
Worked more than scheduled	5%	33%	63%

Abbreviations: h, hours; N/A, not available; NCC, National Certification Corporation; NNP, neonatal nurse practitioner.

differential, 28% received a holiday differential, 27% received a differential for working the weekend, and 7% were paid a differential for being on-call.

TABLE 2. Average Salary According to Practice Setting

Practice Setting	Average Salary	Number
Multiple hospital system	\$124,304	n = 172
Children's hospital system	\$124,653	n = 113
Academic medical center	\$119,701	n = 84
Physician practice setting	\$118,267	n = 59
Neonatal/pediatric specialty services	\$119,262	n = 54
Healthcare services company	\$96,000	n = 4

Regional Differences

Mean salary earned by the respondents per AANP region is also illustrated in Figure 1. Consistent with the 2016 survey,⁵ the highest hourly rate was earned in the West (Region 9), while the South (Region 11) reported the lowest hourly rates.

Benefits

The 2020 survey analyzed benefits available to NNPs. The most valued benefits (after salary compensation) were health insurance, retirement benefits, and paid time off (PTO) at 52%, 40%, and 32%, respectively. Health insurance was reported as a shared employee/employer expense by 74% of the respondents; 15% of the respondents paid for health insurance without employer assistance, and 7% of the employers fully paid for coverage. Although PTO was listed as a benefit by 87% of the respondents, 46% of the respondents who reported they could not use PTO-identified scheduling or staffing issues as the reason. Full compensation for continuing education and tuition reimbursement was reported as an employer-paid benefit for 42% and 22% of the respondents, respectively.

Professional development hours (time to work on projects, research, publications, etc) were not available for 63% (n = 531) of the 2020 respondents. For those who were allocated nonclinical hours for professional development, most (n = 147, 17%) received 1 to 4 hours per week. Nearly 90% of the respondents report their employer paid for their malpractice insurance, and 62% report their employer paid for drug enforcement administration registration. Employee benefit comparisons from previous survey respondents are provided in Table 3. Of note, the survey items in 2014 and 2016 were categorized as yes/no (eg, "Do you receive tuition assistance?"), whereas the 2020 survey asked whether their employer pays for "all, some, or none" of the benefits as different options. Numbers listed in the 2020 column of Table 3 reflect those respondents who reported their employer pays for some or all of the benefits.

TABLE 3. Benefits

	2014	2016	2020
Tuition assistance	50% ^a	47% ^a	45% ^b
Registration fees for conferences	72% ^a	71% ^a	81% ^b
Professional education time	47% ^a	63% ^a	72% ^b
Continuing education	51% ^a	76% ^a	79% ^b
Professional liability	94% ^a	91% ^a	91% ^b
Loan repayment	9% ^a	N/A ^a	5% ^b
Paid nonclinical hours			
None	54%	54%	63%
1-4 h	13%	20%	22%
≥5 h	4%	4%	5%
Unknown/inconsistent	28%	21%	9%
Benefits based on seniority	...	30%	20%

Abbreviations: h, hours; N/A, not available.
^aSurvey responses limited to “yes” or “no”.
^bSurvey enabled respondents to report “some” or “all” reimbursement.

DISCUSSION

As a community, it is essential to describe our role accurately and with clarity. Participation in these surveys allows for documentation of the evolving practice of the NNP. The 2020 survey on the NNP workforce had a lower response rate than previous years. The etiology for limited participation is uncertain but in line with the national trend of decreasing survey response rates.⁶ Perhaps the “check box” type of survey is outdated and unappealing to our younger and tech-savvy NNPs. The “pencil and pen” mode of information gathering is far less appealing than a more dynamic, visually appealing, interactive method of collecting data. A focus group may learn how to efficiently gather this important information.

Although the low response rate may affect the accuracy of the survey data in relation to the broader NNP workforce, identifiable trends over time were noted within the current survey. Specifically, the average age for NNP respondents in 2014 was 49 years, and the average age for the NNP respondents in the 2020 survey was 51 years. The next largest age group for the respondents in 2020 was 61 to 70 years. In total, 55% of the current 2020 survey respondents were older than 50 years. This aging has not changed over the surveys. NANN/NANNP has been utilizing social media to illustrate and describe neonatal nursing with colorful and dynamic advertisements, storytelling, and vignettes to attract more NICU nurses to the NNP role.

The 2020 survey respondents also showed a lack of diversity as most self-identified as non-Hispanic White females. Improving workforce diversity as a national priority is associated with improved delivery of culturally competent care and health equity.⁷

Results of the current survey warrant strategic planning and partnership with ethnically diverse professional organizations, national NNP leaders, academic leaders, and NNP faculty to develop intentional recruitment pathways to ensure a diverse NNP workforce. We must actively engage our multicultural, multiethnic, male, agender, and LGBTQ+ (lesbian, gay, bisexual, and transgender, queer, plus) colleagues to work in partnership to provide the best care for our NICU families.

Based on the 2020 survey results, it appears the number of NNPs with a doctor of nursing practice (DNP) degree continues to rise. The percentage of respondents with a DNP has more than doubled from 2014, which aligns with the Institute of Medicine’s *Future of Nursing* report calling for increasing the number of doctoral-prepared nurses in the workforce.⁸ Opportunities for advanced education have also shown a steady increase over the past decade, with more than 350 DNP programs available.⁹ According to the NCC (R. Bissinger, oral communication, January 11, 2021), NNP-specific programs have grown from 20 programs identified in 2006 to nearly 40 accredited NNP programs in the United States today, with 38 of those programs currently accepting students. Although the number of NNP graduates has appreciably increased in the past 6 years, administrator respondents in the 2020 survey indicated they do not have enough NNP coverage and the NANNP workforce surveys from 2014 and 2016 also identified unfilled NNP positions (nearly 50% and 73%, respectively) as a cause for concern.^{5,10} These discordant statistics warrant further investigation by national NNP leaders, academic leaders, and NNP faculty, especially with 55% of the survey NNPs older than 50 years. Open and inviting gateways must be established to attract more nurses to the NICU. NANN/NANNP has developed a new pillar focused on diversity and antiracism. It is imperative to recruit nurses from diverse and underrepresented minority backgrounds to become NNPs. To determine whether there are specific measures available to help recruit NICU nurses for NNP education, NANN/NANNP plans to delve further into the survey results. Focus groups may help determine the needs for current NICU nurses to go back to school.

Another notable trend that has changed over time is the number of NNPs working 24-hour shifts. In previous surveys, the 24-hour shift was the most popular shift for NNPs.¹¹ In 2020, however, fewer than half of the respondents reported working 24-hour shifts. These 24-hour shifts, along with day shifts, remain the preferred shift for the respondents even though 77% of the respondents do not have protected downtime during their 24 hours. Other relevant trends in the 2020 survey are the number of overtime hours and the inability to use PTO. Over half of the

respondents worked an average of 20 extra hours of overtime per month, and 46% of the respondents rarely used their PTO. Staffing issues were the primary reason respondents were unable to take time off. Taken together with the NNP shortage discussed earlier, further research in best practices to manage 24-hour shifts and support time off is needed to safeguard the NNP workforce from burnout and fatigue¹² while protecting provider health to support safe, high-quality patient care.

NNPs are among the highest paid of all nurse practitioners.¹³ Compensation rates have increased slightly since 2014 and remain heavily influenced by regional differences, education, and specific roles. As expected, those with increased years of experience and higher education had increased compensation packages and job satisfaction in the 2020 survey. No correlation was found between salary and NICU level of care.

The data from this survey may inform NNPs about current trends and help them in making decisions about their career. The importance of researching the market for a good job fit is not limited to those seeking new positions. NNPs with a newly acquired advanced degree may be unsure of their value within their own institution, as they transition to their new role. In these circumstances, although salary and benefits are an important discussion, specific role responsibilities, shift flexibility, expected or required overtime, professional development hours, and other aspects of the desired position are essential to the overall discussion. As new graduates become available to fill open positions and as experienced NNPs examine their options, it is imperative that they have a thorough understanding of the NNP role, compensation, and benefit patterns around the country.

A well-educated, competent, and diverse NNP workforce must remain a top priority to meet the ongoing and dynamic changes within the healthcare system. To achieve this goal, NNPs must understand the current workforce demographics, practice models, compensation patterns, and areas of risk. Given the limitations of the survey and the low response rate, the results discussed here do not allow for extrapolation across the workforce. Still, it provides a snapshot in time to inform the next steps in a national agenda.

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References

1. AANP News. More than 325,000 nurse practitioners (NPs) licensed in the United States. <https://www.aanp.org/news-feed/more-than-325-000-nurse-practitioners-nps-licensed-in-the-united-states>. Accessed May 5, 2021.
2. Your AANP regions. American Association of Nurse Practitioners Web site. <https://www.aanp.org/about/about-the-american-association-of-nurse-practitioners-aanp/your-aanp-region>. Accessed February 16, 2021.
3. WHO's COVID-19 Response. World Health Organization Web site. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline?gclid=Cj0KCQjw59n8BRD2ARIsAAmgPmKus8W7IHtFOVQUngUKrTpvLyXNBGO4Kza-PZWM7fINZl-rVUOiVhoaAotWEALw_wcB#. Accessed February 16, 2021.
4. Committee on Fetus and Newborn. Levels of care. *Pediatrics*. 2012;130(3):587-597. doi:10.1542/peds.2012-1999.
5. Staebler S, Bissinger R. 2016 Neonatal Nurse Practitioner Workforce Survey. *Adv Neonatal Care*. 2017;17(5):331-336. doi:10.1097/ANC.0000000000000433.
6. Czajka JL, Beyler A. *Mathematical Policy Research*. Declining Survey Response Rates in Federal Surveys: Trends and Implications [final report, vol. 1]. Washington, DC: Mathematical Policy Research, Office of the Assistant Secretary for Planning Evaluation, US Department of Health & Human Services; 2016. <https://www.mathematica.org/our-publications-and-findings/publications/declining-response-rates-in-federal-surveys-trends-and-implications-back-ground-paper>.
7. Noone J, Najjar R, Quintana AD, Koithan MS, Vaughn S. Nursing workforce diversity: promising educational practices. *J Prof Nurs*. 2020;36:386-394. doi:10.1016/j.profnurs.2020.02.011.
8. Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: National Academies Press; 2010. https://books.nap.edu/openbook.php?record_id=12956&page=R1. Accessed February 16, 2021.
9. DNP Fact sheet. American Association of Colleges of Nursing (AACN) Web site. <https://www.aacnursing.org/News-Information/Fact-Sheets/DNP-Fact-Sheet>. Updated October 2020. Accessed February 16, 2021.
10. Kaminski MM, Meier S, Staebler S. National Association of Neonatal Nurse Practitioners (NANNP) workforce survey. *Adv Neonatal Care*. 2015;15(3):182-190. doi:10.1097/ANC.0000000000000192.
11. Snapp B, Reyna B. The role of the neonatal nurse practitioner in the community hospital. *Adv Neonatal Care*. 2019;19(5):402-408.
12. Samra HA, Smith BA. The effect of staff nurses' shift length and fatigue on patient safety and nurses' health: from the National Association of Neonatal Nurses. *Adv Neonatal Care*. 2015;15(5):311. doi:10.1097/ANC.0000000000000192.
13. Salary.com. Nurse practitioner—neonatal salary in the United States. <https://www.salary.com/research/salary/benchmark/nurse-practitioner-neonatal-salary>. Accessed February 16, 2021.