The 2014 Neonatal Nurse Practitioner Workforce Survey was conducted by the National Association of Neonatal Nurse Practitioners (NANNP) in collaboration with the National Certification Corporation (NCC) in the spring of 2014. The study was commissioned in an ongoing attempt to collect data on the neonatal nurse practitioner (NNP) workforce population in the United States in accordance with the 2010 Institute of Medicine (IOM) recommendation that effective workforce planning and policy making require better data collection and improved information infrastructures.

The survey, funded through an unrestricted grant from Ikaria, was sent to nationally certified NNPs in the NCC database and to any noncertified NNPs who were members of NANNP. The results encompass data collected from 1,300 NNPs in an effort to examine workforce demographics, practice environments, and current and future workforce needs.

This executive summary highlights the survey’s key findings in the areas of demographics, practice environment, scope of responsibility, work schedule and downtime, patient load, continuing education and other benefits, and practice staffing and training. The complete report on the 2014 Neonatal Nurse Practitioner Workforce Survey with statistical analyses will be made available to NANNP members in early 2015. Targeted, regional statistical analysis of individual items of interest to practices, recruiters, or institutions will also be available through the national NANNP office.

**Background and Significance**

NNPs are the foundation for providing safe and effective care of critically ill neonates in neonatal intensive care units (NICUs) across the United States. As a leader of the interprofessional team, the NNP participates in a wide variety of complex patient care activities in settings that include, but are not limited to, all levels of neonatal inpatient care in both academic and community-based settings; transport, acute care, and chronic care settings; delivery rooms; and outpatient settings (American Association of Critical-Care Nurses, 2002; Haycraft & Voss, 2014).

In keeping with the IOM’s mandate to collect nursing data needed for workforce planning, NANNP and NCC conducted a second NNP workforce survey (following a 2012 survey) to further describe the NNP workforce in the United States.

**Study Sample**

The survey was conducted in March and April of 2014 over the course of 34 days by means of a 25-minute online survey that was accessed by links sent to individual NNPs from NCC. A total of 5,267
survey links were dispersed, and 1,300 NNPs participated; this represented a 24.7% response rate. Each electronic link was tied to an individual NNP in the database so that participants could complete the survey only once. Respondents were screened for the following inclusion criteria:

- Their primary work as an NNP is in one of the following roles:
  - NNP providing direct patient care in a newborn nursery; in a Level II, III, or IV NICU; or as part of primary care or outpatient follow-up
  - Transport NNP
  - Clinical nurse specialist (CNS) or educator
  - Faculty member, dean, or director
  - NNP or advanced practice registered nurse (APRN) coordinator, manager, or administrator.
- They carry out direct patient care practice in a NICU.
- They have been in practice for at least 1 year.

Data management was performed by Kantar Health, a market research firm. The data were aggregated and then analyzed. Mean data points and percentages were used for all data. Statistical significance was analyzed at a 90% confidence interval (CI) using a $t$-test. So that the data could be analyzed in more detail, hospital NICU levels were used as a covariate for statistical analysis.

**Results**

**Demographics**

Ninety-seven percent of the NNP survey respondents were female, with an average age of 49 years. The average number of years of experiences as an NNP was 14. The majority, 81%, have a master’s degree, and 7% are doctorally prepared. The vast majority, 92%, have direct patient care responsibility and spend 75% of their work time in a Level II–IV NICU. Only 47% of survey respondents were currently members of NANNP.

**Practice Environment**

Almost half of the respondents, 42%, practice in the South, with the fewest number of respondents practicing in the Northeast (see Figure 1).

On average, NNP practices cover two sites and employ 14 NNPs per practice. About two-thirds of the respondents in a clinical practice are full-time employees. They most commonly provide service to Level III NICUs; about one-third provide services in Level II or Level IV NICUs.
Scope of Responsibility
The primary role of most of the survey respondents is clinical practice. Almost half of the respondents have a secondary role, most commonly as a transport NNP, an educator, or a CNS. In addition to working in their clinical role, many also provide other services, such as coverage for deliveries, teaching, cross-coverage for house staff, and performance of well-baby consultations or delivery of well-baby services.

Work Schedule and Downtime
The mean number of hours worked by survey respondents was 37 hours per week. Forty-three percent worked more than 40 hours per week, 39% worked 35–40 hours/week, and 19% worked less than 35 hours/week. These findings did not differ according to NICU level. A discrepancy between scheduled hours and actual hours worked was noted: 22% of respondents reported that their actual hours worked exceeded the number of hours scheduled. This discrepancy rose to 47% for NNPs in Level IV NICUs (90% CI).

Most respondents who work 24-hour shifts (70%) are not guaranteed downtime. Of those who are guaranteed downtime, the average downtime is 3.6 hours. Although most NNPs will take downtime even if it is not guaranteed, only 88% of NNPs in Level IV NICUs will take downtime if they are able. The overall average of downtime reported by those working 24-hour shifts was 3 hours per shift. Only 11% of those working exclusively during night shifts reported receiving any downtime.
Patient Load
A sizable share of respondents (32%) report that their patient load exceeds the ideal (defined as “a level I consider safe” in the survey; see Figure 2). When data were analyzed by NICU level, 59% of those in Level IV NICUs “consider their patient loads during their shift unsafe.” Average patient loads considered by respondents to be “unsafe” were 8 in Level III NICUs and 6 in Level IV NICUs.

Figure 2. NNPs’ Perceptions About the Safety of Patient Loads

- Agree completely: 35%
- Agree somewhat: 34%
- Neutral: 12%
- Disagree somewhat: 14%
- Disagree completely: 6%

Survey respondents indicated their agreement or disagreement with the statement “My patient load during a typical shift is at a level I consider safe.”

Respondents’ perception of an “unsafe patient load” was less significant for those working the night shift in Level IV NICUs (25%). Because most NNPs have other duties during their shifts (as discussed above), issues related to patient load may pose a challenge in the provision of safe patient care.

Continuing Education and Other Benefits
The survey respondents revealed that tuition assistance for pursuit of an advanced degree is not always available: only about half of employers provide some level of tuition assistance. However, most survey respondents (70%) report that their employers support their efforts to obtain continuing education and allocate funds for these activities for each NNP in the practice. Survey respondents indicated that although most are responsible for paying for their initial or renewal certification, association membership, and APRN licensure fees, the majority of employers pay malpractice insurance premiums and Drug Enforcement Agency fees.
Practice Staffing and Training

Almost half of respondents believe that their practice is understaffed. Level I–III NICUs average two vacancies, and Level IV NICUs average three vacancies. Forty-six percent of respondents report that open NNP positions have been filled by other healthcare providers (mainly neonatologists [47%], followed by physician assistants and pediatric hospitalists).

Incentives to attract new NNPs were reported by 48% of respondents, although for those working in Level IV NICUs that number increased to 54%. Length of new graduate orientation programs can vary, depending on the level of the NICU, with Level III and IV NICUs offering longer programs. Mentoring and competency assessment programs are in place in only about half of practices, despite national recommendations to provide these programs and the availability of resources, such as tool kits, for that purpose. When asked to evaluate academic programs of study for NNP preparation, 69% of respondents did not believe that the number of faculty members available to lead academic programs was sufficient.

Conclusions

Key areas of concern identified by the 2014 Neonatal Nurse Practitioner Workforce Survey were an aging workforce, the need for NNP faculty, inadequate staffing ratios, the lack of downtime during prolonged shifts, and the need to assist practices in developing competency and mentoring programs.

The survey data indicate that approximately 5% of the respondents plan to retire by 2020. The retirement of NNPs will only compound the severity of workforce issues and intensify the need to recruit nurses into the NNP role. NNPs who are satisfied with their career should be engaged in precepting students and mentoring novice NNPs. All NNPs must be actively engaged in these professional activities to help ensure the longevity of the role.

Expert clinicians need mentoring to prepare them to be expert educators in clinical faculty and full-time faculty roles. A national strategy, led by NANNP, to support NNP programs in partnerships with local practicing clinicians would enable programs to increase the number of NNP faculty and possibly increase the number of clinical placements for students. These partnerships would enable programs to expand the student cohort size and thus increase the numbers of graduate NNPs coming into the workforce.

NNP staffing ratios should be reasonable and should balance the needs of the unit with the provision of safe and effective patient care while providing NNPs with a high-quality work experience. Consideration of patient load (the number of patients per NNP) and acuity (the severity of illness for each patient) and recognition of the NNP’s other expected duties (e.g., attendance at deliveries, house staff supervision) are critical to determining safe staffing ratios. In institutions and practices that maintain the scheduling of 24-hour shifts, guaranteed downtime for NNPs working prolonged shifts should be considered to ensure the provision of safe, competent care.

The implementation of ongoing competency assessment and mentoring programs can be used as a recruitment and retention strategy by both NNP practices and institutions. Furthermore, such implementation meets Joint Commission requirements for ongoing professional practice evaluation (OPPE) and focused professional practice evaluation (FPPE) for new providers.

Providing sustainable solutions to workforce issues while ensuring the continued delivery of high-quality care is a complex challenge requiring attention to many details on a local and national level. We in the NNP profession must continue our efforts to draw attention to the vulnerability of NNP
programs in the larger community of nurse practitioner programs and faculty. Currently, the most critical needs for NNPs in the United States are increased program funding, faculty development support, and student cohort size. Preservation of the current workforce using strategies like mentoring and maintaining more appropriate staffing ratios must also be considered. Shorter shift lengths may allow older NNPs to remain in clinical practice longer than now expected. These strategies, coupled with creative scheduling techniques, will foster better work-life balance and increase NNPs’ satisfaction in their role.

References


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