

Introduction

There are many factors driving health care reform including unsustainable costs, poor outcomes, an aging populace, and physician shortages. These issues are particularly relevant to neurology. New reimbursement models are based on value instead of volume and are facilitated using multidisciplinary care teams. Integration of advanced practice providers (APPs) into neurology practice offers many advantages within new models of care. Conversely, there are many and varied challenges financially and logistically with these practice models. The American Academy of Neurology (AAN) has updated its prior position on neurology APPs to address the needs of both neurologists and neurology APPs, to monitor the effect of APPs on quality and cost of neurologic care and reflect the current healthcare climate since publication of its prior position in 2015.ⁱ

Description of the Issue

It is apparent to providers, patients, and policymakers that healthcare in the United States faces major challenges. Currently health care consumes 16.9% of our GDP resulting in the highest per capita cost of healthcare in the world.ⁱⁱ Despite this, our outcomes are poorer than most industrialized countries, all of which have lower healthcare costs.ⁱⁱⁱ The allocation of healthcare resources varies between regions and within states, and is a particular issue for neurology.

Currently, 40 states report shortages of neurologists. Even those states with adequate supply overall may have areas of limited access to neurologic care, most often in rural locations. A study in the journal *Neurology* found that the demand for neurologists will grow faster than the supply in the next decade.ⁱⁱⁱ In 2012, there was an 11% shortage of neurologists in the United States. By 2025, that number will grow to a 19% shortage.ⁱⁱⁱ There is a pressing need to address these critical issues of access to high quality neurologic care.

The general trend towards high value care including value-based payment models will further determine reimbursement based on outcomes and quality measures. A team-based approach to patient care is necessary to achieve desired high-quality outcomes. This has prompted alignment of physician groups, hospitals, and chronic care facilities in health care systems to improve outcomes at lower costs. This also necessitates all providers operate at the fullest extent of their license and capabilities.

Differences in training, education, continuing education needs, and regulatory requirements exist not only between physicians and APPs, but also amongst APPs. For example, the Physician Assistant (PA) degree has transitioned to a master's degree that follows a traditional medical model of course work and clinical rotations culminating in a national standardized examination, with recertification requirements.^{iv} Similarly, advanced practice registered nurses (APRN) have at minimum a master's degree in nursing, such as a Clinical Nurse Specialist (CNS) or Master of Science in Nursing (MSN) degree resulting in a nurse practitioner (NP) credential but, can also include additional training and certification resulting in a Doctor of Nursing Practice (DNP) degree. The MSN degree takes 2-3 years and includes coursework and clinical experience usually with a specific population focus. The scope of practice for APRNs vary by state but all have requirements for APRN licensure including passing a national standardized exam and meeting recertification requirements.^{iv}

Presented here is the position of the AAN, followed by the rationale and recommended best practices and potential barriers.

The AAN Position

- The integration of advanced practice providers (APPs) into the field of neurology to form care teams and create models of care is crucial to improving access, quality, and continuity of care of people with neurologic disease.
- It is necessary to recognize the accepted scope(s) of practice and allow each member of the neurology care team to practice to the full extent of their professional license, training, and abilities.
- The AAN continues to support policies that promote physician-led multidisciplinary care teams.
- The AAN supports the expanded collaborative role that APPs play in neurologic care.

Rationale

Neurology is a highly nuanced field of medicine. Advances in medicine occur at a rapid pace.^v Providers are required to refine their skills continuously. While the role of APPs in practice cannot replace the need for neurologists, the use of APPs is likely to alter neurologists' role in patient care through meaningful collaboration. Neurologists will remain essential in the process of diagnostic evaluation and development of a care plan through consultations. The Institute of Medicine^{vi}, the American College of Physicians^{vii}, and the American Medical Association^{viii} have all endorsed the need for physician-led multidisciplinary care teams in new healthcare delivery models.

The ultimate goal of integration of APPs is to add value by improving access, increasing the efficiency of the care model, and enhancing quality of care for patients with neurologic disease. APPs can work collaboratively with physicians and conduct evaluations, prescribe medications, order, and interpret testing, and perform certain procedures. They can provide many aspects of care such as education to patients and families, counseling, resource management, and follow-up care.^{ix} Within a team-based care model, APPs have the potential to improve outcomes by improving outpatient access and potentially reducing the need for emergency care.

Barriers

While integrating APPs offers many advantages, there are barriers, including:

- Cost of onboarding APPs to neurologic practice before any financial relief is realized since many APPs may need additional training to develop expertise in neurology.
- Retention of well-trained neurology APPs.
- Challenge of transition to team-based care in neurologic practice; this challenge exists for every member of the team who may need to redefine their roles in a multidisciplinary care structure.
- Lack of standardized academic neurology curriculum for APPs.

Recommendations for Best Practices

There is no single, definitive way to integrate APPs in multidisciplinary care teams. The model varies depending upon multiple factors including practice type – private practice or academic setting, the size and “specialty” focus of the neurology practice, individual state regulations, the individual’s experience in neurology, and institutional practices. It is crucial for clinical leaders to have a desire to participate in a collaborative practice. To create a cohesive care team, a defined mission with clear vision and values must be stated. The team should acknowledge each provider’s

strengths and limitations. It is necessary to recognize the accepted scope(s) of practice and allow each member of the team to practice to the full extent of their professional license, training, and abilities (Appendix).

The Role of the AAN

The AAN should continue to champion the above positions by advocating for physician led team-based care in which all members practice at the top of their scope of practice.

Based on the recommendations of the prior position statement, the AAN has made great strides towards improved quality of care through engagement of APPs. This includes the following:

- Establishment of the Consortium of Neurology APPs (CNAPP) in 2017. AAN APP members are automatically included in CNAPP.
- Efforts to include the APP perspective in AAN committees and subcommittees. Currently, 12 AAN committees have an APP representative.
- Development of an APP educational pre-conference related to the AAN Fall Conference in 2019 with plans to have a pre-conference in 2021 and a standalone APP conference in 2022.
- Launch of an APP Virtual Education Series, a ten-week, self-paced offering including clinical courses, resources, and CME opportunities for APPs in the inpatient and outpatient settings, in 2020.

This workgroup recommends the AAN continue its commitment to its membership by enhancing awareness of best team-based care practices and through education and engagement of APPs. The AAN is committed to developing a spectrum of resources for its members related to integrating APPs to a neurology practice. These resources would address administrative, educational, and operational aspects including:

- Showcasing diverse business models that support a care team model with appropriately certified professionals
- Billing/coding issues specific for care teams including APPs
- Integration of APPs into practice including onboarding, development, and retention
- Evaluating and demonstrating APP integration and association with improved value and outcomes, improved care efficiency, resilience, and reduced burnout through data collection

Resources intended to fill current gaps needed to successfully onboard an APP into a neurology practice, include the ongoing provision of APP-specific education items, and ongoing development of new education strategies.

Resources available and resource needs include:

- Continuing to provide APP-specific and relevant education content at the Annual Meeting and other meetings including the Fall Conference, etc.
- Continuing to support an ongoing APP neurology curriculum encompassing relevant neuroscience and clinical neurology.
- Developing education modules for APPs involved in selected neurology subspecialty practices
- Addressing and advertising educational offerings that target the recertification and maintenance of certification requirements for APPs met by AAN offerings.
- Continuing to receive input from APPs, committees, and general membership to identify education gaps and potential strategies to address those gaps

Position Statement History

Reviewed and approved by the Medical Economics and Practice Committee and the AAN Board of Directors.

Update drafted in 2020 by Pearce Korb, MD, MHPE, FAAN; Jaya Trivedi, MD, FAAN; Robert D. Brown Jr., MD, FAAN; Terrence L. Cascino, MD, FAAN; Nasrin Esnaashari, CNP; Karen Freshwater, PA-C; Brett M. Kissela, MD, MS, FAAN; Monica A. Koehn, MD; Donald R. Shook Jr., MBA.

Originally drafted in 2015 by Heidi Schwarz, MD, FAAN; Joseph V. Fritz, PhD; Raghav Govindarajan, MD; Rebecca Penfold Murray, MPP; Kathryn B. Boyle; Thomas S.D. Getchius; Miriam Freimer, MD.

Appendix

APPs have many opportunities in the field of adult and pediatric neurology, across the spectrum of outpatient and inpatient neurology, within private practice or academic settings, with potential work models to fit almost any clinic need. A Neurologist/APP team-based approach to clinical care in the inpatient or outpatient setting may allow the physician to evaluate and manage the more complex patients and allows them to provide great access and see more patients in a given day with potential to increase RVUs, reduce burnout and increase patient satisfaction. Examples include:

- Practice in the outpatient setting in general neurology or within a single subspecialty area (i.e., specializing in selected conditions within the field of neurology). All models may improve patient access and satisfaction.
 - Evaluation and management of new patients under the guidance of a physician
 - Management of follow-up patients previously seen by physician
 - Timely management of hospital follow-up patients
 - Concentration in a single subspecialty of neurology
 - Work within multidisciplinary care teams with potential leadership opportunities
 - Administration of botulinum toxin for migraine
- Practice in specialty clinics such as multiple sclerosis, dementia, Parkinson's disease, amyotrophic lateral sclerosis, headache, behavioral conditions, stroke, epilepsy, or other specialties including palliative care. Patients may alternate visits between APP and physician.
- Perform procedures as determined by their license and specific procedural training. Examples may include vagal nerve stimulator and deep brain stimulator follow-up, small fiber skin biopsies, and botulinum toxin for migraine. With advanced training, APPs may also treat dystonia, perform selected nerve blocks, and perform lumbar punctures.
- Practice in the inpatient setting assisting with general neurology consults or within subspecialty areas in which they are trained. This includes subspecialty opportunities such as epilepsy monitoring units, and stroke centers. Clinical opportunities include assisting in the admissions of patients, and inpatient consults with staffing and oversight by a physician.
- An APP may be involved in the quality improvement, education and research activities in all settings described above.

References

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