A New Era of Neurologic Practice, the Need to Shift the Residency Training Paradigm, and the Importance of Hospitalist Neurology

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Introduction

Neurologists are a small (~3%) highly subspecialized segment of the US physician workforce providing added value to care of patients with routine and complex neurological conditions. Over time, we have grown from providing mainly cognitive and electrophysiology diagnostic services to providing patients with sophisticated diagnostic, management, and preventive options. We are faced with new challenges with the Affordable Care Act (ACA). The ACA emphasizes primary care-based approaches and encourages preventive services, but neurology is not recognized as a primary home for patients with neurological disease. Furthermore, ACA will result in declines in volume-driven care in favor of “value-added care,” and we anticipate that specialty consultations and diagnostic testing will be major targets for cost savings.

The US physicians are being challenged to make adaptive changes as reimbursements diminish. In this new medical practice era, paradigm shifts in residency training, and subsequent practice patterns, are necessary. Consequently, we advocate for residency training in primary care and hospitalist neurology and other complementary changes to secure the future of Neurology.

Past Lessons

In the first issue of Neurology (1951), Pierce Bailey, the first director of the National Institutes of Neurological Disorders and Blindness, traced the US neurology’s roots from the Civil War through the post–World War II era. He emphasized not only the importance of scientific pursuits to the success of Neurology but also the need for leadership and maintenance of a competitive edge over related specialties such as psychiatry and neurosurgery.1 Also, Bailey stated that neurologists must assume responsibility for the total treatment of patients and in doing so became an early advocate for a neurologist-centered “primary-care home,” an accomplishment that we are yet to achieve.1

In the 1960s to 1980s, the focus of neurology residency training was aimed toward neurologic generalists. Trainees experienced a broad curriculum geared to general inpatient and outpatient practice for a diverse mix of diagnostic and management challenges. Training in electroencephalography and electromyography was emphasized. Although neuropathology was a critical part of the curriculum, neuroimaging was a less pervasive part of the educational milieu. Colleagues in other specialties often criticized neurologists for their inability to prevent or treat many disorders and anecdotally referred to neurologists as “diagnose and adios docs” or quipped: “I would rather have a talking frog than a neurologist!”

The Decade of the Brain (1990s) led to greater emphasis on advances in neuroimaging and increasing prevention, intervention, and disease-modifying options for neurologic disorders.2 With these advances, a fertile field was established for the development of subspecialty practice. Over time, we have metamorphosed into 3 board specialties and 7 subspecialties...
Importantly, and fundamental to our opinion, we could benefit from primary inpatient neurological specialty. The inpatient setting, with loss of control of many cases that then practice only as consultants and become less visible in ical hospitalists or other nonneurologists. Neurologists would voids might develop that would be potentially filled by med- accompaned by unintended consequences. For example, risks may be less prevalent in outpatient than in inpatient settings.

Outpatient practice is favored as it provides more predictable patient flow and thus easier control of life- style and payer mix. Furthermore, medical–legal and financial risks may be less prevalent in outpatient than in inpatient settings.

Neurologists’ retreat from inpatient settings could be accompanied by unintended consequences. For example, voids might develop that would be potentially filled by medical hospitalists or other nonneurologists. Neurologists would then practice only as consultants and become less visible in the inpatient setting, with loss of control of many cases that could benefit from primary inpatient neurological specialty care. Ultimately, neurologists’ retreat from inpatient services could diminish the overall demand for neurologists with eventual funding reductions for training programs. In a direct response to assist the specialty of neurology, calls to realign financial incentives for all cognitively based service providers have been made.

**Making the Adaptive Shifts to Enhance Our Ability to Succeed**

We are concerned that neurologists have become so highly specialized that we are losing the ability to provide diverse neurologic care. Practice patterns have not changed to any considerable degree over the recent years despite many advances in our field. It is our contention that neurologists are not currently well positioned to enter the ACA environment. To compete in a changing environment, we must become prepared to care for the primary care needs of our neurologic patients.

Therefore, we propose 2 key shifts in neurology training. First, we need to train a new generation of residents who are not only well trained in neurology but also have primary care expertise. This could take the form of combined neurology–medicine or neurology–family practice residencies, whereby neurologists are taught to prevent and manage basic adult primary care disorders (eg, hypertension, diabetes, and hypercholesterolemia) and order basic screening tests (eg, mammography, colonoscopy). There is precedent from combined medicine–psychiatry training programs, though few institutions currently offer combined medicine–neurology training. Advantages of such training include creation of a more diverse neurologic workforce, convenience of having physicians who can provide both primary and neurologic care, and a neurologist workforce that is linked to ACA provisions. A 2-track system within neurology residencies focusing either on inpatient or on outpatient care can be created. Furthermore, such training does not preclude neurologic subspecialty training.

Second, we need to consider reorganization of our inpatient service delivery model and actively transition to neurohospitalist inpatient models. Neurohospitalists provide advantages including management of wide arrays of neurologic and medical conditions, with provision for an inpatient primary care medical home for neurologic patients. Furthermore, neurohos pitalists may provide additional value by having subspecialty training in other inpatient-oriented subspecialties (ie, stroke, epilepsy, critical care).

**Conclusion**

The future of Neurology is truly exciting, but neurologists must seize opportunities to assure survival and growth. We advocate for a residency training paradigm that emphasizes primary care and neurohospitalist workforce tracks. We must think creatively to adapt to new realities of medical practice.
Authors’ Note

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