

TRAINING THE FUTURE NEUROLOGY WORKFORCE

Steven P. Ringel, MD

University of Colorado Health Science Center
Denver, CO

Changes in health care delivery have affected every aspect of academic medicine including residency training and graduate medical education (GME). New duty hour regulations have changed residents' role in patient care and new competency standards have altered the curricula of training programs. These changes, coupled with skyrocketing health care costs, reduced reimbursement, patient complexity and an explosion in medical information, challenge faculty today to continue to provide an effective educational environment within this changing landscape.

Gone are the days when being a house officer was a rite of passage and fatigue was a badge of success. The Accreditation Council for Graduate Medical Education (ACGME) has rightfully insisted on placing a higher value on education and patient safety than on meeting service demands. Since July 2003, mandated duty hour limitations require new constructs that provide safe and reliable mechanisms for sign-out duties, cross coverage and continuity of care.

The United Council for Neurological Subspecialties (UCNS) was established in response to a growing demand by neurology trainees for increased subspecialty (supraspecialty?) knowledge and technical proficiency. But consumer and payer demand in our evolving health care system incorporate much more than technological advances. U.S. neurologists spend more time in quality improvement and administrative activities and work in health care systems that emphasize cost containment and interdisciplinary team approaches to patient care management. Future educational programs in neurology have to address each of these facets of medical practice for neurologists to continue to have all the skills to practice successfully.

Neurologists' views about training¹

Traditionally, a significant amount of neurology training occurs at the bedside of hospitalized patients. Internal medicine clerkships and residencies have increased the proportion of time devoted to ambulatory education² and Gelb has emphasized that the ideal focus of education in neurology has shifted to ambulatory settings³. Most neurologists support additional training in outpatient (72%), community (57%) and staff model health maintenance organizations (44%). Two thirds of the residents/fellows compared with about half of practicing neurologists indicated they would increase training in a community setting. Whereas neurology departments traditionally ask community neurologists to supervise students and residents in university settings, only a few programs send students and residents to community practices. Studies of family practice residents have shown that trainees raised and educated in rural locations are much more likely to practice in those settings⁴. To address growing shortages of neurologists in smaller communities, programs need to consider the background of the students they recruit and the barriers to community rotations for residents: financing, service needs, and assurance of an optimal educational experience. The majority of trainees and practicing neurologists favor additional emphasis on primary care during residency training, including optional 5-year medicine-neurology residencies, but they oppose a mandatory lengthening of a neurology residency to 5 years.

About half of neurologists compared with 37% of the residents/fellows indicate residents should be required to pass a national competency examination each year before being allowed to advance. The majority of trainees already participate in the AAN-sponsored residency In-service Training Examination (RITE) so that their reticence of such a requirement may be over mandatory as opposed to voluntary assessment of strengths and deficiencies. National regulatory trends are increasingly requiring documentation of proficiency. ACGME is recommending yearly competency examinations for all training programs and recertification/maintenance of certification for neurologists will include ongoing measures of practice patterns.

Since the scope of neurological practice has broadened, three fourths of today's neurology residents elect one to two years of additional training in any of a variety of neurological subspecialties. In contrast to a relatively consistent response regarding residency training, there are a number of differences in attitudes toward subspecialization among residents/fellows, neurologists who have completed a fellowship and neurologists who have not completed a fellowship. Neurology subspecialty certification is favored most by residents/fellows (80%), somewhat less by neurologists who have completed a fellowship (64%), and least by neurologists who have not completed a fellowship (43%). Almost the same response distribution was seen when the three groups were asked if subspecialists should receive higher fees (82, 66, 34%). A consistent inverse response was noted when asked if more widespread subspecialty certification would be detrimental since it is exclusionary and

deemphasizes core neurological competencies: 69% of neurologists without fellowship training agreed compared to 48% of neurologists with fellowships and 36% of residents/fellows. This diversity is a signal to neurological educators that subspecialty training must not diminish the ability of general neurologists to practice in today's complex health care environment.

Neurologists and the organizations or systems within which many of them practice are increasingly looking to primary care physicians and physician extenders to help provide neurological services^{5,6}. Eighty percent of neurologists believe that primary care physicians can manage uncomplicated neurological problems and two thirds of neurologists believe that nurse practitioners and physician assistants should manage common neurological problems. The scope of practice of physician extenders has been insufficiently studied so that the tangible benefits of working with non-physician providers in the interdisciplinary management of patients need to be established for the future practice of neurology.

Chronic Disease Management

Chronic disease is now the principal cause of disability and use of health services and consumes 78% of health expenditures⁷. Patients with neurological disease can live indefinitely with disease and its symptoms so that future neurologists, including subspecialists, must come to understand what it is like to experience a chronic disease and how to adapt a treatment program to the specific needs and wishes of a patient. Such education must go beyond traditional training in diagnosis, treatment and prognosis. Neurologists need to learn how to manage symptoms like pain and fatigue and coping with emotional distress. The consequences of neurological disability encompass much more than worsening of the disease and include social and economic dislocation, financial fear, lowered self-esteem and depression. Successful chronic disease models often include a team of providers, information systems, familiarity with community support systems, and education of patients in self-management methods. Sharing medical management responsibilities and decisions requires a level of integration that many of today's neurology training programs have yet to achieve.

Clinical researchers in neurology⁸

Although the need for clinical research in neurology has been articulated, progress has been disappointingly slow. The traditional concept of clinical research focuses on patient-oriented activities that bring laboratory discoveries to the bedside. Examples include studies of mechanisms and pathophysiology of disease, experimental therapeutics and clinical trials, and development and evaluation of new diagnostic tests. While important, this type of research is inadequate if future neurologists are to meet the nation's health care needs. We also need behavioral and epidemiological studies of the prevention, prediction and patterns of disease. Similarly, neurologists require effectiveness/outcomes and health care delivery studies that focus on practice issues and their impact on patients and practitioners in real-world settings.

When I received training, my educational opportunities were almost exclusively directed toward the body of knowledge of neurological disorders. We infrequently considered the complex medico-legal or ethical issues that arise in caring for patients. Unlike today, we also never discussed quality of care, utilization management, cost-effectiveness and patient safety concerns. Fortunately, the health professions now recognize that residents must be familiar with these critical management strategies as patients today are sicker, spend less time in the hospital and receive more complicated treatment. Evidence-based practice guidelines are becoming more commonplace, and it is no longer acceptable for physicians to practice idiosyncratically. The learning environment is evolving, and the challenge for us is to keep it relevant and efficient for trainees. Neurology residents and fellows can greatly benefit from training in an academic environment that studies the complex interactions between a disease, the people who are affected by it, the social network that surrounds them, and the health care delivery system that seeks to provide them quality care in a safe, cost-effective manner.

Getting back to basics

Two recent national studies by the Institute of Medicine (IOM)⁹ and the Agency for Healthcare Research and Quality (AHRQ)¹⁰ concluded that nearly half of U.S. adults have trouble interpreting medical information. This situation is medically counter-productive as studies have shown that informed patients are more likely to participate in their care, make wiser decisions and adhere more fully to treatment recommendations¹¹. For physicians to help a patient, they require diagnostic skill, active listening, and the ability to individualize their approach for each patient. While those qualities are abundant among neurological educators, just eaves drop on doctors talking to patients. Typically you hear medical jargon and complex explanations, and it's the rare patient or family member brave enough to say 'I don't understand.'

Over the years, I've learned that almost every aspect of our health care system is more responsive to the needs of patients with major organ failure. There is an insatiable appetite in our training programs for learning about rare diseases and the latest medical innovations. Our health care system fosters assembly-line efficiency for performing procedures and tests but allows little time and resource for personal interaction and communication. In writing "Patients like Linda"¹² I hoped to call attention to the equally important and more difficult task of treating patients with somatic preoccupation. Tests won't help these patients. Rather they need us to listen and to care.

Although physicians understand the benefit of informed patients, fewer than 10% of doctors spend sufficient time thoroughly educating their patients during an encounter¹¹. Since patients typically recall only a fraction of the information physicians transmit, clearly the odds of gaining our patients' understanding are markedly reduced. No single approach will work with all patients; but demonstrating empathy and admitting a certain amount of human uncertainty will go a long way toward establishing common ground.

These ABC's of communicating with patients, while important enough for every physician to embrace, are often in conflict with the time demands we all experience¹³. Yet, to build a bond and level of trust with our patients, we have to find the time to listen and to care. We all recognize that knowing the medical aspects of a patient's illness and providing that information in an understandable manner is essential. But, we fall short if we fail to recognize that patient's individuality and values. In an era of technological breakthroughs, improved safety and better outcomes, leaders in neurological education must not neglect the humanistic values that are the core of medical practice. Students and residents need to be socialized during their medical education always to maintain the primacy of patients' health interests. Humanism is not readily taught, assigned or graded into students. It comes with discovery and having someone with whom to talk through the experience. As neurological educators, we have the privilege and responsibility to role model humanistic values in all our interactions. It's time well spent.

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