

## **Careers in Neurology**

A large variety of career options are available to neurologists. Every neurologist takes a different path and can tell a story about his or her particular career. AAN Members were asked to submit answers to the following four questions, to give medical students a taste of the opportunities available to them after graduate:

1. What career option you have chosen and why?
2. What do you do in a typical day?
3. The advantages of your particular career path and/or subspecialty and why a medical student should consider it.
4. Anything else you want to share, as you see fit.

### **Academic/Neurocritical Care**

I have chosen a career in academic neurology, specifically within the area of neurocritical care. I entered the field because I like to perform ICU based procedures and I enjoy the challenge of thinking about complex medical problems that have a life or death outcome. I see this as a bridge between diagnostic neurology and neurosurgery or endovascular neurology. In a typical day I see between 8 and 14 patients in the ICU who are there because of stroke, intracranial hemorrhage or subarachnoid hemorrhage. I am trained to manage every aspect of their care from tracheal intubation, to ventilator management, to invasive line placement, to medical decision making regarding needs for operative procedures and other medical management, and I greatly enjoy family discussions and helping coordinate multidisciplinary care. I also spend about 25% time performing clinical research, the type of research that involves patients directly and is the closest science to directly impact patient care. Finally, I teach medical students (co-chair the neuroscience first year course for students), residents and fellows in neurocritical care. My job allows me to see patients, contribute to meaningful research and allows me to mentor physicians interested in learning advanced skills in neurocritical care. Any medical student who is drawn to this level of patient interaction and intervention should consider rotating on a neurocritical care service run by a neurointensivist.

Wade Smith, MD, PhD

### **Academic/Teaching/Research/Neuro-ophthalmology**

1. Academic/teaching/clinical research/patient care in Neuro-Ophthalmology
2. No day is typical. That is why what I do is so fabulous. At least 2 days per week I see patients with residents and fellows. At least once per week I am giving some sort of teaching lecture. I attend grand rounds, specialty conferences, etc. I sit on innumerable committees for the medical school and the university, including committees on teaching, faculty development, promotion, etc. I write papers and books. I review articles and grants. I travel as visiting professor and to various meetings within the country and in various places around the world to present papers and teach courses. I am usually on one of these trips about once every 6 weeks.
3. You never get bored! You get to do lots of different things while still being a doctor.
4. You need to be able to multitask and like the feeling of never being sure of what you are doing! And yes, you can still have a family and do other things outside of medicine (but it's best if you really enjoy what you do professionally, including writing).

Nancy Newman, MD

### **Academia/Teaching/Research.**

1. I just 'followed my nose'. I was interested in a lot of things but got really excited about genetics during my internship and ended up doing a post doctoral fellowship in a great Human Genetics lab.
2. I read and write a lot. Meet with students and post docs, occasionally see a research patient (with one of a number of genetic neurological disorders). I travel pretty often to go to meetings or give talks. I lecture occasionally in medical school or graduate school courses. I'd estimate: Administration 25%, Teaching 25%, Research related (not counting administration and teaching) 25%, Travel, community service (meeting with patient advocacy groups, reviewing grants and manuscripts, etc.) 25%.
3. It's extremely exciting. Doing very basic research ultimately will have huge impact on our ability to diagnose and treat patients.
4. Follow your passion. If you love what you do, you'll enjoy doing it hard and well. I believe this is the most important factor in 'success'.

Louis J. Ptacek, MD

### **Academia/Teaching/Critical Care**

1. Academia/Teaching in the subspecialties of Critical Care, Interventional, and Stroke and Vascular Neurology. Purpose: to be able to contribute in a meaningful way to the care of not only the patient of today but also the patient of tomorrow. This approach keeps my scientific curiosity satisfied requires that I stay at the forefront of medical knowledge. Research and teaching are the cornerstones of medical advancement.
  2. I see patients in clinic on certain days of the week. Other days I spend in the interventional suite performing endovascular procedures. Hospital rounds allow me to interact with residents and medical students one on one. A great deal of time is spent on daily paperwork both for patient care as well as for administrative and research reasons. Much of my research occurs when I am at home where I can read and write.
  3. Interventional neurology combines the best of both worlds: the cerebral/cognitive skills (pun intended) of a neurologist with the ability to help patients in life-threatening situations by treating them. I do not have to sit around while a surgeon or radiologist treats my patients with stroke. I treat them myself. Nothing can be as rewarding as seeing a hemiplegic or comatose patient wake up and walk out of the hospital.
  4. The path for physicians is getting ever more difficult and sometimes less rewarding. Nonetheless there is not a nobler profession nor one that is so rewarding. It is important to remember that the physician can be the last line between life and death and he/she must not let anything get in the way of exceptional and compassionate patient care. Even when others (health professionals included) try to prevent you from doing the right thing (be it patient care or an unusual training pathway like interventional neurology), you must never shy away or give up.
- Alex Abou-Chebl, MD

### **Academic Neurology**

1. My career option is academic neurology. I chose neurology because I think that the brain is the most fascinating part of the body. I considered psychiatry but thought that it was too depressing. I wanted to be in an academic atmosphere; I enjoy doing clinical research, and at one time had considered becoming a Classical Archaeologist. I chose epilepsy because it seemed to be one of the most treatable neurologic disorders (I had done a residency in Internal Medicine) and because the clinical manifestations, involving transient disorders of perception and consciousness were fascinating to me.
2. In a typical day, I see a few patients, go to rounds and conferences, meet with fellows and students and work on data analysis and manuscript preparation. I can set my own hours.

3. In addition to its intrinsic interest, neurology has practical advantages, as the population is living longer, and aging, leading to a greater prevalence of neurological disorders. Neurology is particularly suited to people who like academic life, as it is a reflective field; generally, one ought, and has time, to think before acting. The main stresses in academic neurology (or any other academic medical specialty), compared with practice, are related to institutional politics and getting money for research. On the other hand, one's activities are more varied and interesting, and one can interact with a much broader range of people.

William H Theodore MD

### **Academic Neurology**

I have chosen to be a neurologist because I liked the “detective work” involved. More I knew more I was interested in the unknown cases; I like difficult cases. This was my reason to become an academic physician. My general neurology practice is not more than 10% and I narrowed my practice to my subspecialty interest. Approximately 60% of my referral comes from other neurologists. This guarantees that I am well supplied with interesting challenging cases. I rarely have a boring day.

Teaching gives me a challenge as well. The best questions come from medical students who “do not know a lot” about the field and have a fresh eye that makes me rethink my “old ideas”. Besides seeing patients I do electrophysiology studies. This lets me do technical work and sit at the patient's bedside sometimes for hours. Every day I do something different. One day I am in the outpatient office and see patients, next day I do nerve conduction studies and electromyography, the third day I look at patients sympathetic and parasympathetic responses in the autonomic laboratory that I built, the fourth day I look at nerve and muscle biopsies under the microscope and the fifth day I teach and discuss patients and conduct or plan clinical research. I consider myself very lucky that I never have a dull moment.

My latest interest is autonomic disorders. I am fascinated by the system that makes us able to respond quickly to all sorts of challenges (f.e. standing up). The disease of this system severely interferes with a person's life and often people (including physicians) do not understand patients suffering with dysautonomias. Because the disease often can not be seen it is ignored. I made my mission to understand these diseases and the patients better and to educate physicians and general public to understand the nature of these diseases. This made it possible for me to meet all sorts of people and interact with them socially.

Katalin J. Pocsine

### **Research/Academia/Teaching/Neurorehabilitation and Neural Repair**

I work at an academic rehabilitation hospital where I focus on studying stroke recovery. Clinically, I spend most of time as a rehabilitation neurologist overseeing the rehab of patients with stroke, traumatic brain injury and other brain insults. I have an outpatient clinic once a week, I do neurorehab consults over at the acute hospital, and I do acute stroke attending on the Neurology service for a few weeks each year. My call is light.

The majority of my time I spend on research, studying mechanisms of motor system recovery after stroke and how to enhance it. I also do clinical trials of recovery treatments and other recovery-related issues. I teach residents and students regularly. In the past, I have been a medical director of rehabilitation programs, fellowship director, and had other academic and administrative roles.

I chose this career path because I was exposed to rehabilitation during medical school and neurology residency, and I was immediately taken with how patients recover from catastrophic

injuries, and how little was known about how this happens. Thus, I get to do bleeding-edge research while at the same time focusing on issues of fundamental importance to patients.

I am very happy with my career choice. I have found it deeply satisfying on a personal level, in part because I get to improve the status of patients that are considered by others to be untreatable. These patients have great needs that rehabilitation can help. The rehab setting allows me to interact with patients over a longer period of time, usually months and years, and it is one of the few places in medicine where old-school physician-patient relationships routinely still happen. While the workload is just as high, the time urgency is less on rehab, and allows me to control my work life more than those physicians whose practice revolves around emergencies. Finally, while neurorehab is not currently a glitzy specialty, I think it will be one of the fastest evolving areas of medicine over the next 50 years, and I am excited to be a part of it.

Alexander Dromerick MD

### **Behavioral neurology & Geriatric neurology**

1. Teaching, research, clinical care. I found it easier to work within a focused area (behavioral/geriatric neurology) if I remained in an academic setting. Teaching, research, and patient care are all part of most academic careers, and I enjoy the opportunity to contribute to all three areas. I have worked in an urban setting, but the setting has been more an accident of where most academic medical centers are located.
2. My typical day varies. It is different now than what it was, say, 10 years ago. I probably spend about 20% teaching (including teaching preparation), 50% research (including grant writing and writing scholarly papers), 15% outpatient clinical care (the percentage of clinical care was considerably higher in prior years and at one time included substantial inpatient clinical care), and 15% administrative.
3. It's fun! I cannot conceive of a field of medicine or a neurological subspecialty more intrinsically interesting than the field that deals with brain/behavior relations. Many patients with cognitive or behavioral problems are elderly, so for me geriatric neurology goes hand in hand with behavioral neurology.

Victor Henderson, MD

### **Academic/Child Neurology/Epilepsy**

I chose to go into academic child neurology with a subspecialty interest in epilepsy. My job combines research, clinical practice and teaching in an academic setting. In a typical week, I will spend one day seeing patients. Another day will be spent seeing research patients (I do primarily NIH funded clinical research with an emphasis on longitudinal studies of long term outcome of children with seizures, autism and other neurological disorders). If attending, I will make rounds every morning. The rest of my day is spent in research, teaching and writing as well as my duties as director of the epilepsy unit. The advantage of an academic career is that one can combine the satisfaction of seeing patients with research and teaching. I find that the combination makes each one more interesting. My research is clinically relevant and keeps me up to date. Conversely being a teacher and a researcher makes every patient an opportunity to learn more. The reason I chose child neurology is that you have a shot at making an impact that can last a lifetime and because kids are more fun. It is true that losses are more difficult in children but the rewards of success are also so much greater. If I had to do it again, I would still choose the same career path as I love what I do (except for all the paperwork but that would be the same regardless of which career path you choose)

Shlomo Shinnar MD PhD

### **Epilepsy/Academic**

I am an epileptologist at an academic teaching institution. I chose epilepsy because it offered a

unique combination of both procedural and cognitive based skills, and a myriad of both surgical and medical treatments that would be available to help individuals with both new onset and refractory epilepsy. On an average day, I typically will either be working in an epilepsy monitoring unit facilitating evaluations of patients who are either being referred for surgical evaluation for intractable epilepsy or a diagnosis is being confirmed for their condition. This will alternate with seeing outpatients and staffing residents and fellows in a busy clinical setting for both epilepsy and clinical neurophysiology cases. The advantages of my particular career path are that there is a variety of various skill sets that you can use on a given day. On one day you can be involved in a clinical neurophysiology question; on another you are involved in ethical and legal issues surrounding the condition. The biggest advantage is that there are a number of treatments that can be offered to patients and that is most satisfying. If I were a medical student I would very much consider a career as an epileptologist.

In addition, I am involved in education administration and that has been also a highly fulfilling position in being able to strategize how medical knowledge will be delivered for a new generation of physicians.

In summary, epilepsy and clinical neurophysiology is a wonderful career path in Neurology that never becomes boring. There is enough variety for individuals who need to have a variation as part of the typical workday. It has been most rewarding and I would happily encourage individuals to seek more information regarding this career choice because it has been such a fulfilling choice.

Joseph I. Sirven, M.D.

### **General neurology**

1. LA County, mostly general office Neurology, two weeks of eight are on a fast-paced neurology inpatient and consultative service to wards and ER, including acute Pediatric Neurology. Night call mostly from home at but exhausting, 24/14. Teaching of Internal Medicine Residents, medical and PA students is almost entirely during ward rotation along with shared supervision of 14 Physicians' Assistants and additional PA trainees.

2. Situation in flux. Expect increasing amount of office neurology and elimination of inpatient neurology service with heavy ER consultation in its place. Up until this point the practice has been free wheeling, the pathology astounding, teaching fun. There is time for research. So far I have been trying to find my way around the facility. My subspecialty is Oto-neurology. I hope a half-day clinic opened in the area of dizziness and eye-movement disorders.

3. If I had it do over again, I would have chosen this path over my original private/multispecialty-group/paper-shuffling choices. But there are trade-offs in benefits and currently in job security.

Nina Zasorin, MD

### **General neurology**

I was always interested in science but medicine allowed for human contact along with my interest in science. I chose neurology because of my medical school anatomy teacher who made me realize how fascinating the nervous system is. I see 6 new consult patients and 4 followup patients. On weeks where I am on call I see patients in the hospital. There is nothing more complex and fascinating as the brain and nervous system. It is a rapidly changing field and never dull. The problems that patients have are often complex and difficult to understand but are rewarding once you determine the diagnosis. It is very important to know how to communicate in a compassionate way before going into medicine.

Barbara Scherokman MD, FAAN, FACP

### **Military**

I feel a bit uncomfortable answering these questions because I'm doing so little neurology these days. I have chosen to answer, though, not just out of respect for the Academy committees, but also because I recognize that my own career path has been so unusual that it may interest medical students.

I originally chose, as a fourth career (after having been an academic and in private practice, and a drilling Reservist in a field hospital unit), to be a military clinician, or, as we like to call ourselves, soldier medic. I spent four years after going active duty doing the Army's version of academic neurology, with an active clinical practice, an active clinical appointment at a fine civilian medical school, and some active research protocols. I was assigned as the go-to-war physician for an infantry unit and trained regularly with them. During that time I had the chance to deploy with Army forces and co-run a clinic in Saudi Arabia, where I also got to admit to Saudi military hospitals and to do a great deal of mass casualty planning for metropolitan Riyadh. Previous to this I had deployed to Central America for a month as the only physician in the country, which was a real baptism of fire since I hadn't done general (non-neurology) medicine for 12 years before that.

Nine years ago I was recruited into the medical chemical defense community. I spent eight years instructing in the training courses in chemical casualty care at the US Army Medical Research Institute of Chemical Defense, serving as the Institute's operations officer, deploying regularly with expert response teams from the Army, the Department of Justice, and the Department of State, writing military (four-service) doctrine regarding chemical casualties, advising all sorts of people on these issues including the Surgeons General of Thailand, Bahrain, Korea, Kuwait, and Korea, and training forces worldwide including 14 foreign countries. In addition to helping to build the most frequently visited web site in the Department of Defense, we also produced the largest CME events ever held, satellite television training courses that reached 10,000 students (mostly physicians, nurses, and EMT's) at one time. I spent the last of these years working half-time as the chemical defense expert for the Secretary of the US Department of Health and Human Services, trying to ready the civilian sector for chemical terrorism. For the last four years I've been the Consultant for Chemical Casualty Care to the US Army Surgeon General. While at the Institute I also started a neuroprotection research program and have coordinated research to produce a post-exposure neuroprotectant for nerve agent survivors. I also obtained funding to entice industry to develop a far-forward seizure monitor for nerve agent survivors.

Last year I was asked to take a new assignment as Deputy for Medical Affairs to the Joint Program Executive Office for Chemical/Biological Defense. My boss, a two-star general, commands over \$1.5 billion in acquisition programs for chemical and biological defense, of which about 15% is medical. We include within our portfolio of programs of record medical countermeasures including vaccines for anthrax, smallpox, and plague, drugs such as pyridostigmine, oximes, atropine, and skin lotions for chemical agents, and medical devices including a biological agent detector. My primary job is to make sure that my general makes acquisition decisions which make medical sense and to keep him informed of what is going on in the chemical and biological medical defense community.

I retain my Consultancy within the Army and continue to teach in the USAMRICD courses.

Clinically I am a full Professor of Neurology at the military's medical school, the Uniformed Services University of the Health Sciences, and attend on the wards and clinic at Walter Reed Army Medical Center, our biggest military hospital and the location of our largest neurology residency. I try to get to clinic about one half-day per week, and attend one month per year.

I don't have a typical day any more. As mentioned, I'm lucky if I can get to clinic on Friday mornings. That's when we have a live patient for discussion; following that, I try to hang out in the clinic and supervise residents who present cases. I lecture at the medical school several times a year and in the USAMRICD courses on chemical casualty care about once a quarter. Most of the rest of my time is spent working for the Joint Program Executive Office for

Chemical/Biological Defense, where I'm the highest-ranking military officer below our commanding general. Tasks that come across my desk are highly varied. Here are a few: commenting on legislation pending before Congress, responding to a Senator whose constituent, at one of his state universities, has a technology that he's trying to sell to the Government as a great idea for chem/bio defense, advising panels of three-star generals on where the budgetary priorities for chem/bio defense should be, helping to set up an office to run a new program which will try to accelerate development of defenses against intracellular bacterial pathogens and haemorrhagic fever viruses, justifying proceeding with a program to develop a circulating bioscavenger for nerve agents, representing my two-star general in bilateral negotiations with visiting delegations from Japan and Poland, assisting the Department of Health and Human Services in setting requirements for the civilian sector which complement rather than compete with the efforts in the Department of Defense, etc., etc., etc. And then there's the occasional job which comes with being the Army Consultant for Chemical Casualty Care, including policy meetings with the other leaders in Army medicine, reviewing clinical records of people who may have been exposed to chem/bio agents, and, very rarely, actually evaluating such patients clinically.

To the best of my knowledge, no neurologist has ever had a career in chemical/biological defense before, and so the concept of a "career path" is a bit tenuous. I can tell any medical student interested in this area that it is burgeoning, and that there are a lot of self-appointed experts therein. The best advice is to get thoroughly well-trained in neurology, or another recognized specialty, and obtain proper specialty boards, not only for self-preservation -- it's always good to have a clinical skill upon which to fall -- but mostly for respect. Fully trained MD or DO physicians in this field form a tiny percentage of the universe of self-appointed experts, and they are given great respect because of their clinical skills. Being a neurologist has helped because I can say I know a lot about the brain and nerves, which no one else tends to know much about; it also allows me somewhat to understand the psychopathology of some of the people I need to work with!

On the other hand, I can warmly recommend the military as a career for a neurologist who is looking for the opportunity to do things that most neurologists don't get to do. Recognize that deployments are indeed part of the job; over 50% of military neurologists have deployed in the past 5 years, by my rough calculation. But it is indeed a privilege to take care of those who have volunteered to take care of the country. And the quality of the women and men whom I have seen as patients, and even more, the quality of those with whom I serve, is so high as to make many of the inconveniences trivial by comparison.

Jonathan Newmark, M.D., FAAN

### **Movement Disorders**

I am a movement disorder fellow half way through subspecialty training. I started out as a military neurology resident, became board certified, and then spent four years as a general neurologist attending. I did a combination of clinic/inpatient, teaching and research. I was a neurology program director for a year prior to finishing my military commitment and starting my fellowship.

My current work schedule is very interesting. Two mornings a week I spend several hours evaluating patients with movement disorders in a rehabilitation hospital. Three full days a week I see patients in an outpatient clinic academic tertiary care center. One day a week I see patients in a outpatient clinic outside of the city. I also have a research day. In between those activities I see movement disorder patients on the wards, provide lectures to medical students and residents, and cover calls from the patients.

I think that finding a position where you can combine the clinical experience, teaching, and some research is ideal, at least for me. I am a full time neurologist and the mother of two children under 5 years of age. It is challenging trying to be a superwoman. It is essential to have good reliable child care and a supportive family. You can't have it all... in moderation.

Anna Hohler

### **Movement Disorders**

1. I am a movement disorders specialist with a research interest and board certification in sleep medicine. I work in an academic institution participating in clinical care, clinical research and education.
2. I see movement disorders patients 3 days a week and spend the other two either doing educational projects or clinical research. I enjoy my work and the travel it entails. I travel to participate in meetings and to present in educational programs. I particularly enjoy trying to make the science and the clinical flow into each other and to communicate this to others at all levels of training from patients through my fellow subspecialists
3. I have had the opportunity to participate in a variety of programs and projects. I never have one week that is exactly like another. I have met many interesting people and have traveled to many areas of the world. Although I did not realize it when I first decided to go into my subspecialty, this is an aspect of my career that I find particularly enjoyable. My patient population is varied but interesting. Even with a disorder such as Parkinson's disease, there are no two patients that are exactly the same. I feel that the focus of my subspecialty area allows me to provide the highest level of care to this particular group of patients.

Cynthia Comella, MD

### **Multiple Sclerosis/Academic**

1. I am a neurologist, specializing in Multiple Sclerosis, working in an academic University setting. Specifically I am an Associate Professor of Neurology at SUNY University at Buffalo and the Director of The Baird Multiple Sclerosis Center for treatment and research as well as the Director of the new Pediatric MS Center of Excellence at The Jacobs Neurological Institute, Buffalo, NY. I have chosen multiple sclerosis as my niche because of my continuing interest in immunology and the related disorders affecting the nervous system.
2. I spend most of my time seeing primarily MS patients and supervising fellows, residents and nurse practitioners in our MS clinic for 3 full days a week. The rest of my time is usually spent in our research program, working on the ongoing or new developing projects, as well as seeing study patients (patients enrolled in different therapeutic trials). Weekly working research meetings are necessary to provide continuous flow in the research projects. We also have a basic science laboratory, and communication with the lab staff must be maintained in a daily basis. Presentations for fellows, residents, and other physicians are also a part of our busy schedule.
3. Taking care of patients with a chronic disease such as MS represents a challenge because as their neurologist you often become their primary physician being involved in almost all of their medical needs. Nevertheless, this offers a great opportunity to engage in a very close and lifelong journey with our patients. You become an integral part of their life and you'll share successes as well as their down times. You will have a very big responsibility because the patients are usually giving you their complete trust and you have to deliver to meet their expectations.
4. Over the last two decades many of the neurological diseases considered once "diagnostic entities" with only symptomatic therapies became treatable diseases. Similarly MS is now a treatable disease giving us as neurologists great satisfaction to be able to positively interfere within the natural disease process. However, we still do not have the cure, and a continuous

search for more efficient interventions is necessary. Improving the research, especially by bringing “the lab to the bed” and vice versa, we will be able to get closer to the cure for these chronic diseases and new energetic physicians are necessary.

Bianca Weinstock-Guttman, MD

### **Neuroinfectious diseases**

1. I first became interested in infectious diseases while spending summers during medical school in Panama and Mexico working on tropical infections. This expanded when I joined the Centers for Disease Control and Prevention for two years in the PHS. After my neurology residency, I took a fellowship in Neuroinfectious diseases at Johns Hopkins to learn how to study CNS viruses in animals.

2. For 30 years I split my time working as a general neurologist in clinics and wards with focus on CNS infections and conducting basic research in my virology laboratory studying viral infections of the inner ear in hamsters, Reye’s syndrome in mice, and congenital CNS infections in humans. I now am collaborating with another infectious disease internist to study both the clinical and basic virology of West Nile virus in New Mexico.

3. First, new CNS infections come along regularly and need neurologists to understand them. Second, we need to know lots about the old CNS infections. Third and important, is that there are few neurologists studying neuroinfectious diseases. Internists and PhD scientists know the infectious agent but not the CNS. We are really needed. Fourth, the field can take you to very interesting countries to study the CNS infection in the field.

Larry Davis, MD

### **Pharma/Research**

I work both in the pharma industry and in a specialty practice where I can do research in MS. It is a terrific combination crafted over a number of years...It allows me time to do grant work from home, travel, and work on significant health issues effecting our environment. I meet with physicians interested in investigator-initiated research with Pfizer throughout the geography for which I am responsible. ½ day per week, I also see patients. I travel 2 – 3 days per week and can work from the home the other days. I have a great deal of autonomy in this job that is fabulous. I would offer up to any medical student or resident the idea that the world has many opportunities not necessarily the norm or what might be expected while in training – keep all of your options open and also keep an open mind! I certainly had no idea that such a job was even possible!

Margaret Frazer, MD

### **Pain Management**

Neurology was a broad field with many subspecialty areas. I was trained in my residency to do Neuroimaging and clinical research. When I first began practicing, I found no time for research but remained very involved with imaging, going on to CT and then MRI interpretations. Out of clinical interest I went for additional training in Pain Management. I subsequently set up an Interventional Pain Center. As I narrowed my practice down I was more successful financially but more importantly I had time for clinical research and a happier quality of life.

Dr. Frank Hussey

### **Private Practice/Pain Management**

For career options: “When I began my internship in 1977, cardiology and pulmonology were the only specialties that interested me. I chose rotations early in my internship year, hoping to cement my decision for one of those areas. Much to my surprise, neither of those rotations was satisfactory. The rotation that I dreaded the most was next on the calendar---neurology. I quickly liked many things about neurology, even though I despised my rotation as a medical student. Neurology and neuroanatomy now revealed an organization, a pattern, a simplicity that were not

evident earlier. I opted out of my internal medicine residency and enrolled in a neurology residency, where I was astonished at the number of subspecialties available. The list of considerations included neuromuscular disease, MS, stroke, movement disorders, and neuroradiology. Though I was offered fellowships in neuromuscular diseases, I chose to enter the private practice of general neurology. After several years of general practice, the number of subspecialties had grown noticeably, and I found myself deeply interested in pain management. My practice is now 99% pain management, and I find it most rewarding. The practice is a combination of academic and clinical work.

There are many physicians who fearfully avoid the chronic, unrelieved pain patient, thus generating the crisis of under treatment of pain in America. Thirty to 40% of Americans have pain syndromes that are inadequately or poorly treated. It is estimated that 80% of nursing home patients have un-addressed pain needs. My patients are profoundly grateful for the concern shown them, and even small reductions in pain allow them noticeable changes in their daily activities. With proper monitoring and chart maintenance, I have little anxiety about drug misusers or pernicious monitoring by federal agencies. It has long been stated that neurology is the specialty that diagnoses but does not treat its. That statement can now be used only by those ignorant of the progress of our specialty. I enjoy each day, knowing that my patients will find additional comfort by the end of that day.”

Don Bivins, MD

### **Stroke**

I am a senior stroke neurologist and vice chair of a major neurology department. My day begins by meeting the residents and teaching them regarding decisions made overnight in the emergency ward. Each day we read all the neuroimaging studies from the night before. This is followed by a visit to my patients who happen to be in hospital. My practice is diverse. Mostly made up of stroke patients that I cared for acutely. Some treated with intravenous or intra arterial thrombolytic therapy. Some being managed closely for secondary stroke risk reduction. I also care for diverse set of patients with migraine and parkinsonism in whom medical management is an ongoing process.

I generally do paperwork and correspondence in late morning or meet with members of the various stroke research teams to advance the research effort. During some periods we are intensely researching and writing grants, during others analyzing data. I am part of a call schedule in which the acute stroke team rushes to a "stroke code" and evaluates stroke patients for the optimal therapy. Three months a year I attend on the inpatient neurology, neurointensive care or stroke ICU consult team. I also regularly see patients in our rehabilitation hospital as a consultant.

With the American Academy of Neurology, I also get to work with groups of neurologists as they consider and execute plans to improve neurologic care and practice. Lecturing on stroke to other neurologists or other physician groups is also an important part of my work. Finally I have had the opportunity to work with disease-related organizations as we team up to treat or prevent stroke.

The most fun thing about my job is that it is always interesting and lots of new things to get involved with. More so than any other field of medicine there are tons of ways to make a difference. As an example, since I started the entire stroke field underwent a revolution. Very exciting times to be in Neurology.

Walter Koroshetz, MD

## **Neuromuscular Disease**

1. I chose the field of Neuromuscular Disease, which involves the study of diseases affecting the peripheral nerve, muscle, neuromuscular junction, and motor nerves. I chose it for two main reasons. The first is that it was one of the few areas in neurology where one could go from the clinical presentation of the patient and then look at the physiology of their problem (through EMG studies) as well as the patho-anatomy (through nerve and/or muscle biopsy). This ability to look at all three aspects of a patient's case is extremely rewarding.

The second reason is that I simply found the relationship that a physician has with neuromuscular patients to be very special, requiring a combination of neurologic, psychologic, orthopedic, rehab medicine, and general medical skills. I follow many of my ALS and muscular dystrophy patients from diagnosis to death, and develop an extremely close relationship with most of my patients.

2. Typically, I will be in the clinic for at least half, and sometimes the whole day in an outpatient setting. On months when I am "on-service", I also have to round on the in-patients or see consults for the other services. Usually, I try to do some academic work as well (writing grants or papers, participating in clinical trials, teaching students or residents, etc). It makes for a busy, but extremely varied and rewarding, day!

3. The rewards of academic neurology are too numerous to mention! Every day is different and an intellectual challenge. You are never bored, and you are doing your part to advance our knowledge base and improve lives for your patients. There is nothing more rewarding than participating in a study that provides new insights into the cause or manifestation of these terrible diseases, and how we can better treat patients suffering from them.

4. Only that it is very ironic that when I was a beginning 3<sup>rd</sup> year medical student, I decided to do my neurology rotation first to get it out of the way, since it was the ONLY specialty that I was absolutely CERTAIN I would NOT go into! I was immediately struck, however, by the team approach taken to most neurologic disease and the very special relationship that develops between a neurologist and their patients. Neurologic disease affects the things that make us most human, like cognition, speech, moving around, walking, and the ability to care for ourselves. When diseases threaten these basic aspects of life, patients need a physician with unique skills and a caring, professional approach!

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