

Career Pathways: A. M. Barrett, MD, FAAN, FANA, FASNR

Plotting your career path isn't easy, but thinking about the big picture can help. "Consider what you want your legacy to be, and let that guide you in the career choices you make," said ASNR Past President A.M. Barrett, MD, FASNR, as she reflected on her own journey. Dr. Barrett is currently Chair and Professor of Neurology at UMass Chan Medical School. She is also Chief of the Neurology Service at the VA Central Western Massachusetts Healthcare System, and she is board-certified in neurology, behavioral neurology and neuropsychiatry, and brain injury medicine. In her research, Dr. Barrett studies brain-behavior relationships relevant to spatial cognition and the rehabilitation of spatial neglect, which is a condition that makes it difficult for individuals to perceive and respond to things on one side of the body that is opposite of a brain lesion. She is also interested in person-centered care, functional and life participation outcomes, the identification and management of hidden disabilities, and the mechanisms that underlie diminished awareness of deficits.



Laying the Foundations: Scientific and Medical Training

As an undergraduate student at Harvard University, Dr. Barrett was fascinated by cognitive psychology. She had the opportunity to work under the mentorship of Dr. Stephen Kosslyn, a pioneer who helped develop the field of cognitive neuroscience. This experience was an excellent introduction to research, and her undergraduate thesis focused on lateralization of brain function. In particular, Dr. Barrett learned about specialized functions of the visual system that involved the left or right hemisphere of the brain in individuals without brain injury. Through this project, she became more interested in how sensory information is processed in the brain, and she began to think more about how these processes could be disrupted after brain injury.

After completing her bachelor's degree in Psychology and Social Relations, Dr. Barrett started working at the Boston Aphasia Research Center. The Center was a unique collaboration between the Veterans Affairs (VA) Boston Health Care system, Boston University, and Harvard University, and several key leaders in the field were part of this collaborative consortium, including the behavioral neurologist Dr. Norman Geschwind, neuropsychologist Dr. Edith Kaplan, and psychologist Dr. Harold Goodglass.

"Attending their interdisciplinary conference and also seeing everyday interactions between clinicians and researchers gave me a deep appreciation of the value of bringing experts from different areas together to share ideas," Dr. Barrett noted. She remembers deep discussions surrounding the underlying brain mechanisms of different types of aphasia and therapeutic approaches that could target particular brain systems. These conversations shaped how Dr. Barrett thought about rehabilitation as necessarily interdisciplinary and interwoven with mechanism-based neurology.

To further pursue her interests in this area, Dr. Barrett enrolled in medical school at New York University School of Medicine. While there, she was mentored by Dr. Martha Taylor Sarno, an outstanding speech-language pathologist who taught Dr. Barrett a lot about the patients' perspectives and shaped her approach to delivering care. Upon completing medical school, Dr. Barrett interned at Norwalk Hospital/Yale University School of Medicine, followed by a residency at Columbia University and the Neurological Institute of New York. At Columbia, Dr. Barrett was mentored by Dr. Richard Mayeux, another remarkable speech-language pathologist, and he continued to provide valuable guidance throughout her early career.

In a subsequent fellowship in behavioral neurology at the University of Florida, Dr. Barrett learned a great deal from the late Dr. Ken Heilman. Dr. Heilman was a renowned expert in spatial neglect, which remains a topic of interest in her research today. Beyond helping develop her research interests, Dr. Heilman taught Dr. Barrett important practical lessons that were important for success in research. "He really taught me how to package my work in a way that would be financially sustainable and how to create a broad base of support in grant funding to be a clinician-researcher," recalls Dr. Barrett. Dr. Heilman also emphasized that keeping an open mind and observing patients would allow her to generate much better ideas than those she would get by reading in the library. These insights were instrumental as she launched her faculty career.

Building a Successful and Meaningful Career through Research and Clinical Care

When Dr. Barrett began as an Assistant Professor at Penn State College of Medicine, she also joined ASNR. She realized that many of her colleagues were ASNR members, and this connection with her personal network made ASNR a natural choice. Dr. Barrett was mentored by several ASNR members in her early years in the Society, including Dr. Michael Selzer, Dr. David Good, Dr. Bruce Dobkin, and the late Dr. Alex Dromerick. Beyond ASNR, she also found a great mentor in Dr. Paul Eslinger at Penn State. Dr. Eslinger helped Dr. Barrett develop her skills in functional brain imaging and really helped shape her career spanning both research and clinical care.

"Even when I started medical school, I remember telling people that I wanted to do neurology and research, but I didn't realize how much I wanted to do both until I worked with Dr. Paul Eslinger," Dr. Barrett explained. "People are always encouraged to focus. However, for me, I knew that picking just one or the other wasn't the answer," she continued. Interactions with patients stimulated Dr. Barrett's research, and they provided important insights that she couldn't get working only in the lab. Conversely, doing research in the lab gave her opportunities to contribute to creating the tools and knowledge that were poignantly needed in clinical practice.

"You have to follow your own unique abilities," she advised. "My purpose, I think, is in being in both worlds — the lab and the clinic. I like to take what I learned in one world and apply it in the other world and vice versa." By staying engaged in both research and care from the beginning of her career, Dr. Barrett kept her research skills sharp and up-to-date, and her regular interactions with patients ensured that her research questions were sustainable and practical for

clinical application. These have been key factors in her getting and maintaining research funding over the years.

Dr. Barrett successfully directed her independent research program on spatial cognition, as well as clinical programs in memory disorder evaluation, movement disorders, and general neurology at Penn State College of Medicine. At the same time, she became more involved in ASNR through participation in Committees. The opportunities that societies like ASNR provide for early-career faculty to get involved in service and leadership roles are valuable for career development and for gaining experience in working collaboratively with individuals who span a wide variety of disciplines relevant for neurorehabilitation.

Not long after being promoted to Associate Professor of Neurology with tenure, Dr. Barrett accepted a new role as Director of Stroke Rehabilitation Research at the Kessler Foundation. Dr. Barrett attributes her involvement with ASNR, as well as the American Congress of Rehabilitation Medicine (ACRM), as factors that likely contributed to her recruitment at Kessler. Overlapping with her time at the Kessler Foundation, Dr. Barrett also held an appointment as Professor of Physical Medicine and Rehabilitation at Rutgers Medical School, balancing research, clinical care, leadership, and teaching responsibilities.

Embracing Leadership Opportunities

“While at Kessler, I really caught the bug for administration and for expanding my activities across clinical programs. I began to think more about the progress that could be made in evidence-based care for spatial neglect and other conditions by overseeing a group of many talented physicians,” Dr. Barrett remarked. Despite being a very disabling condition, spatial neglect is likely only diagnosed in approximately half of the people (or fewer) who have it, even in the United States. Dr. Barrett quickly realized after beginning work on her first R01 grant that the gaps in diagnosis of spatial neglect were going to be a practical problem for recruiting participants for her studies. At the same time, she was surrounded by therapists at Kessler Foundation and Kessler Institute who strongly believed in the benefits of rehabilitation and were dedicated to providing the best-possible care for patients.

“I had a big awakening where I started looking at data from the CDC and other sources. I saw that most people don’t get out-patient rehabilitation, and they certainly don’t get it during the time window when it might be most effective,” Dr. Barrett said. Further, she recognized that even when people receive treatment, they may not be treated with evidence-based approaches. Instead, they may be treated using approaches that have never been evaluated or using modern, abridged versions of older methods that may not be as effective.

“I realized that this was just a crime for people and their families. That’s what drove towards the administrative path,” Dr. Barrett explained. She knew the field of neurology was full of people with tremendous knowledge about what may be some of the best ways to treat patients, and that neurologists could be very beneficial for patients undergoing rehabilitation. Many neurologists were already doing consulting in inpatient and outpatient rehabilitation. To have the

biggest impact, Dr. Barrett knew she wanted to ultimately become chair of a neurology department so she could help advance this change in the field.

During this period, Dr. Barrett also became a leader within ASNR, serving as president in 2011 and 2012. Through her continued membership in ASNR, she met many rehabilitation scientists that she likely would not have otherwise met, including researchers in spinal cord injury and other areas. “It’s good to be a member of a number of different affinity groups — to be with people who are going to push you, support you, applaud you, and sponsor you as your career develops. The ASNR community very much did that for me,” she recalls.

Being a leader in ASNR also provided Dr. Barrett with insights into how to successfully manage an organization, including working with a board of directors, balancing multiple stakeholders, recruiting, developing programming, and working collaboratively to achieve organizational goals and advance the organization’s mission. She recalls drawing on these experiences from ASNR as examples when she was applying for leadership positions.

The next stop on Dr. Barrett’s career path brought her to the Center for Visual and Neurocognitive Rehabilitation at the Atlanta VA Health System and Emory University where she served as Executive Director and Neurorehabilitation Division Director, respectively.

Finding Balance and Working Towards a Brighter Future for Neurorehabilitation

Dr. Barrett’s leadership experiences in ASNR also proved valuable when she was applying for her current positions as Neurology Chair at UMass Chan Medical School and Chief of the Neurology Service at the VA Central Western Massachusetts Healthcare System. In her present roles, Dr. Barrett’s work has the potential to impact medical students, residents, other neurologists, the community in the central and western Massachusetts area, and the general public.

For example, in her clinical research over the years, it was common to get stuck at the point of implementation and getting people to actually use approaches that have been shown to work in research studies. For spatial neglect, evidence has shown that an approach called [prism adaptation therapy](#) works. In this therapy, individuals wear glasses with prism lenses while they reach their arm towards visual targets. Prism adaptation therapy is used to promote stimulation, modification, and potentially long-term changes of brain connectivity to address spatial neglect. This approach is practical and billable as a treatment, but it is not always used.

As a leader in neurology and neurorehabilitation Dr. Barrett is trying to change this to ensure that evidence-based interventions like prism adaptation therapy are implemented in patient care to enhance recovery after stroke or other nervous system damage. “When I thought about what I wanted to do next with my career, I wondered, what do I want to accomplish? What do I want my legacy to be? I realized that what I want is for there to be a convenient, accessible place where people with spatial neglect or their loved ones can go to get information about the condition and get connected with local resources in their area,” she related.

Balancing a multitude of responsibilities isn't always easy. Throughout her career Dr. Barrett has mentored and advised dozens of faculty, medical students, PhD candidates, undergraduates, residents and fellows, and trainees often ask how she maintains balance and sets priorities. Management and leadership training is something that scientists and clinicians don't often seek, but she has found it to be really beneficial. Some great research has been done in industrial organizational psychology and business administration, and Dr. Barrett has found useful tools and strategies to help with setting priorities and maximize the impact of the tasks she does. She also emphasizes that good leaders build great teams and delegate tasks to others. "The most important thing, though, is probably just not to be too hard on yourself if you're having trouble balancing things. Rehabilitation is a holistic activity, and I think it is an intrinsic trait of people in rehabilitation to want to do more than one thing. Try to use tools to your advantage to help avoid burnout," she advised.

Reflecting on the Importance of Equity and Advocacy to Advance the Field

A common thread that has emerged in Dr. Barrett's career is the importance of equity and how working towards health equity can make society better as a whole. This was something she has been reminded of regularly through her roles in the VA Health System and also something that was part of her daily life at the Kessler Foundation where she worked side-by-side with people who had physical and/or cognitive disabilities.

This is something she wants to emphasize more strongly as a leader in neurology. "As clinicians and scientists, we should be thinking about how we can be helpful. How can we lend our voices to help people to get what they need? There is a great need for us to unite our forces across disciplines to advocate for the things we believe are essential for people to have in their rehabilitation in the future," Dr. Barrett stated. "Something we say in neurology is that we began to be a more powerful specialty when we started to advocate for ourselves at healthcare organization and government levels. As fields, rehabilitation and neurorehabilitation have the same tasks in front of them," she continued.

ASNR is committed to our mission to advance the science of neurorehabilitation and neural repair from understanding to application, and we believe this mission will be advanced through fostering diversity, equity, and inclusion in our organization and the broader neurorehabilitation community. Exceptional leaders like Dr. Barrett have helped shape our Society into the organization it is today, and they continue to leave their mark on the field, contributing to better outcomes for people with neurological injury or disease.