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THE INTERNATIONALIZATION OF THE AMERICAN ACADEMY OF NEUROLOGY

The American Academy of Neurology (AAN), established in March 1948, was born out of a desire to create an inclusive professional society for neurologists, particularly for those nascent in their careers as young neurologists and those in training. This was in deliberate contrast to the more established American Neurological Association (ANA), at that time a 75-year-old association whose restrictive membership comprised only senior, mostly male leaders of American academic neurology predominantly in Northeast American institutions.¹ The AAN's agenda for inclusivity was reflected not only in its relatively open membership requirements but also in the creation of a woman's auxiliary.

On the international front, despite an appearance at the International Congress of Neurology in 1949, the AAN did not maintain formal representation at international meetings in its formative years due to a conflict with the ANA about which organization should be the international representative of American neurology.² However, in 1958, the AAN formally joined the World Federation of Neurology (WFN) as a member society, a year after the WFN was formed.³

Internationalization of the AAN. As the AAN grew to become the central societal home for neurologists in America, neurologists abroad were eager to partake in top research and educational opportunities affiliated with the AAN. Over the past 20 years, the AAN annual meeting has grown from 5,556 professional attendants in 1994 to more than 10,000 in 2014, and attendance from non–United States–based participants has increased from 997 in 1994 to 3,571 in 2014. The largest international contingents came from Canada and Western Europe.⁴ This same pattern is reflected in AAN membership: in 2013, of the approximately 26,000 members of the AAN, 4,800—or 19%—resided outside of the United States.³

To facilitate increased access to the annual meeting and other educational programming for members from low- and middle-income countries (LMIC), the

AAN has awarded international scholarship awards since 2004. At present, these scholarships include 13 International Scholarship Awards—5 awarded based on the quality of the submitted abstract and 8 on other criteria such as personal need and country of origin—and the Bruce S. Schoenberg International Award in Neuroepidemiology. Other AAN efforts to expand the role and access of AAN members from LMIC include discounted annual membership and opportunity to participate in rush tickets for annual meeting courses. For example, in 2013, the AAN provided free membership to 21 physicians in low-income countries and a discounted membership of \$150 to 349 physicians in lower middle-income countries.

With the growing number of international members, the AAN began organizing yearly gatherings for international members at the annual meeting in 2007. These summits brought together AAN's international members for further opportunities to collaborate and improve their practices at home, just as its United States–based practice programming is meant to improve neurology practices in America.

Scientific programming at the AAN annual meeting has also grown to reflect its increasing international membership, as well as increased United States–based interest in global health. Although infectious disease topic offerings with a global health component date as far back as 2003—with discussions of CNS infections and before that, interest in HIV/AIDS—2008 marked the first dedicated “Global Health Challenges: Neurology in Developing Countries” educational session. In 2013, the meeting offered Global Health as a new abstract topic category, alongside more traditional categories, and also included an Integrated Neuroscience session on the global impact of noncommunicable neurologic diseases.

Growing AAN efforts in global health. With the development of neurologic care in countries worldwide, international collaborations among practitioners and researchers in neurology continued to expand. However, the idea of global health and public health within neurology gathered momentum only in the early 2000s due to increased public and professional

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awareness of the public health aspects of neurologic disorders.^{5–7} This heightened awareness was in part encouraged by the WHO launching a global initiative on neurology in 1993,⁸ but more so, an outpouring of interest among the greater medical community toward global health. Although it was initially a special interest group, the AAN's Global Health section was approved for full section status in September 2011 and endorsed by the AAN Board of Directors in October 2011.⁹ In this way, neurology joined several other specialties in rising to the increasing demand that exists among students and practitioners to internationalize health care innovation and delivery.

The Global Health section allows for facilitation of efforts around public global health issues, beyond the opportunities for international members described above. Other AAN sections are also interested in global health issues, including the Neuroepidemiology, Neuro-infectious Disease, Epilepsy, and Ethics sections. For example, the A.B. Baker Section of Neurologic Educators sponsored an education colloquium at the 2010 annual meeting on international education. Furthermore, for the last few years, the Residents & Fellows' Career Forum at the annual meeting has included an International Collaborations Posters session for programs that feature an international elective.⁹ The Donald M. Palatucci Advocacy Leadership Forum has also provided a platform to train international and domestic members to become effective advocates for their patients, with graduates including AAN members from Ethiopia, Georgia, Jamaica, Pakistan, and Sri Lanka.

The AAN has also expanded its support for neurology-related activities in low-income countries in a number of ways. First, it has become a leader in distributing neurologic education to physicians throughout the world. For example, AAN publications—including *Neurology*[®], *Continuum*, patient brochures, abstracts, and podcasts—can be accessed electronically either free or at a substantially reduced cost through the WHO's HINARI Program and via cell phone and tablet mobile apps. The AAN also provides free teaching materials, including textbooks and online courses. Second, AAN staff translate Select Guidelines from the Centers for Health Policy into a number of foreign languages to make these documents more accessible to neurologists in low-income countries. Third, the AAN has partnered with nongovernmental organizations to establish country-specific health care delivery. These initiatives include volunteering in Haiti with Operation Blessing International; the Ecuador Neurology Project to enhance the knowledge of Ecuadorian doctors, medical students, and trainees; and the Afghan Neurological Care Fund to support training in neurologic care for physicians practicing in Afghanistan. The AAN recently chose to partner with Health Volunteers

Overseas, a private nonprofit organization dedicated to improving the availability and quality of health care in developing countries through the training and education of local health care providers. Finally, the AAN collaborates on an educational grant request program through the WFN for members interested in conducting international projects with high impact in low-income settings.

Considerations for the future of AAN internationalization.

The AAN has predominantly grown globally in 2 ways: (1) increased involvement from international participants and (2) greater promotion of global health research and collaboration. As the AAN continues to expand these international avenues, one central question remains: How will the AAN determine what new opportunities will be considered as part of its international and global health efforts? The AAN should take into account the following 3 considerations when answering this integral question.

First, the AAN should continue to broaden its efforts to promote membership, access, and involvement of neurologists from LMIC. As mentioned above, the largest international contingents of the AAN have been from developed countries, such as Canada, Western Europe, Australia, Israel, Saudi Arabia, Japan, and South Korea. These high-income countries average 3 neurologists per 100,000 people, while low-income countries average only 3 neurologists per 10 million.¹⁰ Moreover, the burden of neurologic diseases is concentrated in LMIC.^{11,12} Therefore, to achieve the AAN's goal of health equity and increasing capacity-building worldwide, and to truly understand the range and burden of neurologic illness that exists, the AAN must continue to place a priority on participants from the lowest income settings.

Second, the AAN should adopt a broad definition of global health. Traditionally, international health has been used to connote health work abroad in countries other than one's own, with a content focus on infectious and tropical diseases. AAN's efforts have largely followed this traditional approach. For example, the global health conversation started by expanding opportunities in neuroinfectious disease in the early 2000s and has focused on addressing neurologic diseases in developing countries. However, the field of global health has now broadened to tackle issues besides infectious disease and focus on other regions of the world, including countries that have limited neurologic capacity for reasons that extend beyond national income level. Global health should reflect the realities of globalization, which has led to the worldwide dissemination of both infectious and non-infectious public health risks. More than 60% of preventable deaths worldwide are now attributable to noncommunicable diseases.¹³ Indeed, the global in

global health refers to the scope of various health problems, not their location. Global health—taking it one step further from international health—should address domestic health disparities in addition to cross-border issues.

Finally, the AAN must navigate the reciprocal benefits of sponsoring neurologic research, professional development, clinical service, or policymaking worldwide. In an increasingly complex global health arena, no organization can serve all purposes in all locations. These challenges include the high burden of neurologic diseases everywhere, the many countries and locations in need, the burgeoning US student and neurology trainee interest to go abroad, and the many emerging and neglected neurologic diseases. Finding the most impactful way to shed light on neurologic care that maximizes more than 6 decades of AAN professional leadership will require special expertise, professional stewardship, difficult choices, and multidirectional conversations. The AAN will be compelled to draw upon new talents of its members not limited to the science of the brain.

In a world of more than 6 billion people, a majority of whom will be affected directly or indirectly by neurologic disorders, the AAN—a group of mere thousands by comparison—has made impressive efforts to expand international and global health opportunities in the field of neurology. We can and must continue to maximize the impact of the AAN around the world. By increasing the voice of neurologists within the greater global health community, the AAN can help ensure that neurologic patients' needs are met, no matter where they live.

AUTHOR CONTRIBUTIONS

Dr. Saadi drafted and revised the manuscript for content. Dr. Mateen conceived the concept and design of the manuscript and wrote parts of and edited the manuscript. Both authors read and approved the final manuscript.

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