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CREATION OF THE AAN GLOBAL HEALTH SECTION, PART I: INTRODUCTION AND BACKGROUND

The idea of a Global Health Section within the American Academy of Neurology (AAN) came from a group of neurologists with active work in sub-Saharan Africa, who believed that the AAN could provide a greater leadership role in supporting the advancement of quality neurologic training, research, and patient care in low- and middle-income countries (LMICs). Initially a Special Interest Group, the Global Health Section was approved for full section status in September 2011 and endorsed by the AAN Board of Directors in October 2011. The Global Health Section currently consists of more than 200 members. In a 2-part series, we present a summary of the Global Health Section strategic plan and vision for future activities.

The purpose of the Global Health Section is to bring together members with interest and experience in global neurology to foster communication and collaboration on initiatives that promote the goals of advocacy and education for neurology in resource-limited regions of the world. The Global Health Section aims to promote 1) advocacy by building partnerships with existing organizations in order to initiate and support broad-based global efforts for the prevention and treatment of neurologic disorders; and 2) education by developing and supporting initiatives to build local capacity for neurologic training and research in LMICs.

There is growing global health interest within the AAN membership. The Section can help to coordinate the energy and resources within the AAN membership to most effectively meet the above goals. The Global Health Section also aims to improve the knowledge of the general AAN membership on global health issues in neurology.

Current state of global health in neurology. Global burden of neurologic disease. The Global Burden of Disease (GBD) study estimates disease burden using a metric that combines premature mortality and disability into

a single value called the disability-adjusted life-year (DALY). One DALY can be thought of as 1 lost year of “healthy” life. The burden of disease is a measurement of the gap between current health status and an ideal situation where everyone lives into old age, without disease and disability. While neurologic diseases categorized within neuropsychiatric disorders represented 1.9% of global burden of disease in 2004, conditions or disorders that are not conceptualized as being primarily neurologic diseases within the GBD framework are not included in estimates of neurologic burden.¹ These include stroke, many infectious diseases with neurologic sequelae, such as HIV/AIDS, tuberculosis, and parasitic diseases, as well as traumatic brain injury, birth asphyxia, birth trauma, and malnutrition. The neurologic burden rises to 6.1% when stroke and some neuroinfections are included—stroke (3.1% of total DALYs), meningitis (0.8%), dementia (0.7%), epilepsy (0.5%), migraine (0.5%), tetanus (0.3%), Parkinson disease (0.1%), and multiple sclerosis (0.1%).¹ In aggregate, the neurologic burden is greater than HIV (3.8%), tuberculosis (2.2%), and malaria (2.2%).¹

LMICs increasingly bear the double burden of infectious and noncommunicable disease (NCD). In 2008, 60% of deaths worldwide were from NCDs. Within these deaths from NCDs, 80% occurred in LMICs and 30% occurred in people younger than 60 years.² Death from neurologic disease, as a percentage of total deaths, is 8.0% in low, 15.6% in lower-middle, 15.0% in upper-middle, and 13.7% in high-income countries.¹ In all WHO regions, death attributable to neurologic disorders is dominated by cerebrovascular disease.

Despite the large neurologic burden worldwide, there remains a neurologic workforce gap in much of the world that is most striking in Africa, where there are 0.03 neurologists per 100,000 people.³ Striking treatment gaps exist across the spectrum of neurologic diseases. For example, 80% of the global

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Editor's Note: Part II of this Global Perspectives article, “AAN Global Health Section, Part II: Visions and goals,” will be published in the June 4 issue of *Neurology* with an accompanying editorial by Global Perspectives Editors Dr. Johan Aarli and Dr. Oded Abramsky.

burden of epilepsy occurs in LMICs, with an unacceptably high treatment gap affecting the poorest populations. The treatment gap is more than 75% in low-income countries and more than 50% in many lower- and upper-middle income countries, compared to less than 10% in high-income countries.⁴ Treatment gaps are twice as high in rural areas compared to urban areas. Clearly, increased resources are needed to help improve neurologic care and services in LMICs.

Current organizations involved in global health in neurology. In order to achieve our goals, the Global Health Section recognizes the need to partner closely with existing neurologic organizations involved in global health in neurology. These include but are not limited to the following:

- Alzheimer's Disease International and the 10/66 Disease Research Group (<http://www.alz.co.uk/1066/>)
- European Federation of Neurological Societies (<http://www.efns.org/>) and European Neurological Society (<http://www.ensinfo.org/>)
- International Brain Research Organization (<http://www.ibro.org>)
- International League Against Epilepsy (<http://www.ilae.org/>) and International Bureau for Epilepsy (<http://www.ibe-epilepsy.org/>)
- Lifting the Burden (<http://www.l-t-b.org/>)
- Movement for Global Mental Health (<http://www.globalmentalhealth.org/>)
- Neuropathic Pain Special Interest Group (<http://www.neupsig.org/>)
- World Federation of Neurology (<http://www.wfnepurology.org/>)
- World Health Organization (<http://www.who.int/en/>)
- World Neurology Foundation (<http://www.worldneurology.org/>)
- World Stroke Organization (<http://www.world-stroke.org/>)

An overview of specific objectives and projects within these organizations that align with the goals of the Global Health Section can be found in the strategic plan (<http://www.aan.com/go/about/sections/global>). We welcome input from these and other organizations interested in collaboration as well as the AAN membership.

Current AAN activities in global health. The international activities of the AAN are guided by the International Subcommittee, which reports to the Science Committee. Current activities related to LMICs include the following:

- Continuing medical education providing *Continuum* courses since 2001, in partnership with the World Federation of Neurology Education

Program, with current user groups in 44 countries.

- International Scholarship Award to up to 10 international members to attend the annual meeting and present a research abstract.
- Bruce S. Schoenberg International Award to a promising young investigator in neuroepidemiology from a developing country or Eastern Europe.
- Discount annual membership fee of \$150, waived registration fee for annual meeting, and opportunity to participate in "rush" tickets for meeting courses for members from LMICs.
- Supporting calls for neurologists to volunteer in Haiti through collaboration with Operation Blessing and Hospital St. Luc.

Sections within the AAN with interests in global health include the Neuroepidemiology, Neuroinfectious Disease, Epilepsy, and Ethics Sections. The A.B. Baker Section of Neurologic Educators sponsored an education colloquium at the 2010 annual meeting on international education. For the last few years, the annual meeting Residents and Fellows Career Forum has also included an International Component Posters session for programs that feature an international elective.

Current state of global health training within the United States. There is increasing interest in global health opportunities and careers among current trainees. A number of medical schools have integrated global health into their curricula and offer international elective rotations. An increasing number of trainees are interested in pursuing fields where global health opportunities and careers are possible. While other fields such as infectious disease, emergency medicine, internal medicine, and pediatrics have been the traditional fields toward which those with global health interests have gravitated, there are clear possibilities for neurologists to play an important and critical role in the global health landscape given the rising burden of NCD. As in other specialties, an increasing number of neurology trainees seek global health opportunities, and an increasing number of training programs are investigating how to provide these opportunities. However, at present, neurology as a specialty lags behind other fields in establishing opportunities for global health training and careers.

With this introduction and background, the second part of this Global Perspective series will provide an analysis of the role the AAN Global Health Section can play, and section vision and goals.

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All authors contributed to the conceptualization and content of the manuscript. Dr. Lee contributed to drafting the manuscript, and all other authors contributed to critical revisions of the manuscript for intellectual content.

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This podcast begins and closes with Dr. Robert Gross, Editor-in-Chief, briefly discussing highlighted articles from the May 28, 2013, issue of *Neurology*. In the second segment, Dr. Andy South-erland talks with Dr. Melissa Armstrong about the guideline on periprocedural management of antithrombotic medications and neurovascular disease. Dr. Roy Strowd then reads the e-Pearl of the week about HINTS of stroke. In the next part of the podcast,

Dr. Binit Shah focuses his interview with Dr. Kapil Sethi on the management of non-dopa-responsive axial motor symptoms. Disclosures can be found at www.neurology.org.

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