

Role of U.S. Neurology Residents in Training Local Providers and Sustaining Neurology Care in Low Income Countries:

Education in Neurology in Resource-Limited Settings *For* and *By* Neurology Residents

Aaron Berkowitz, M.D., Ph.D.

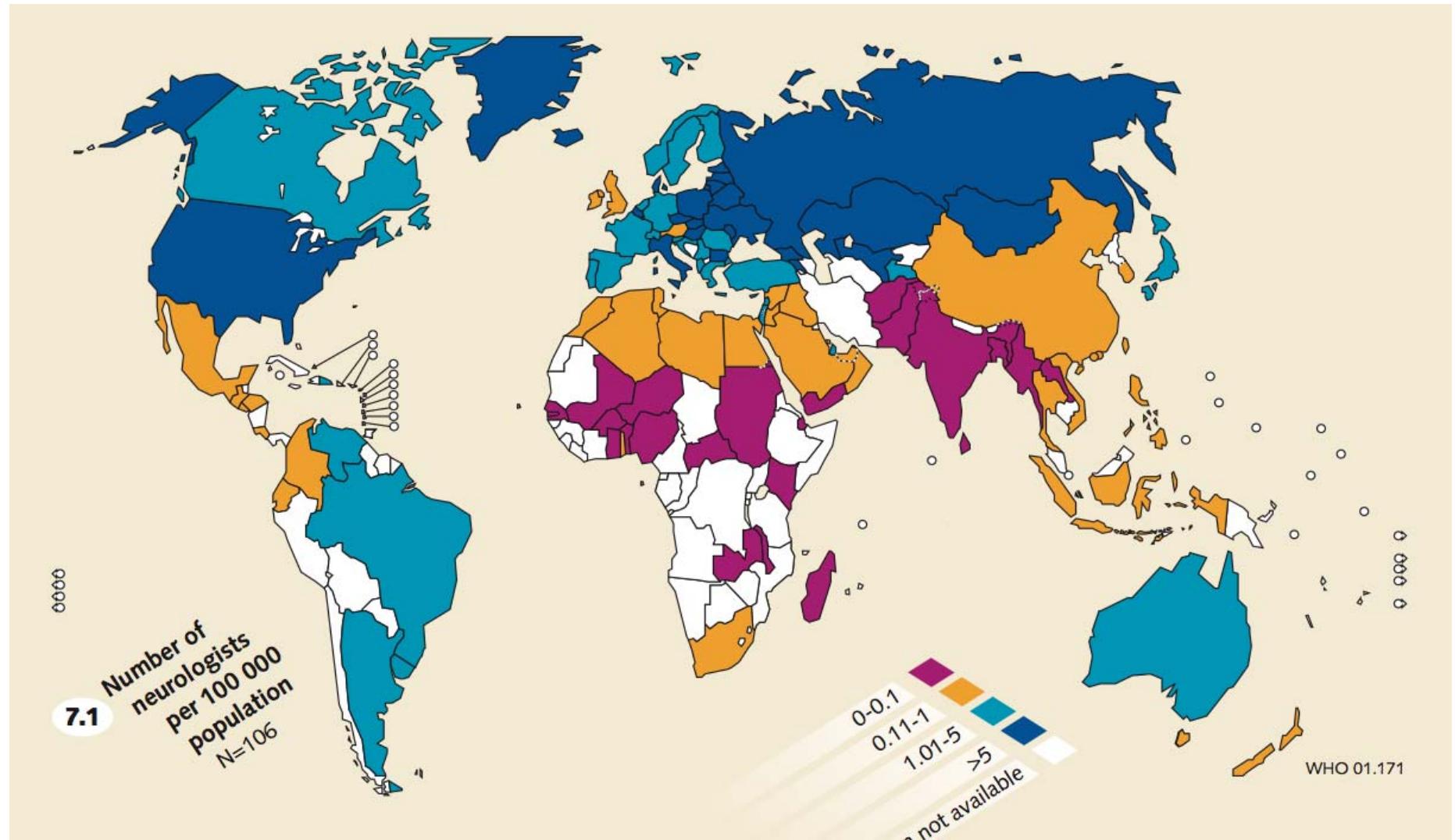
Director, Global Neurology Program

Associate Neurologist, Divisions of Hospital and General Neurology
Brigham and Women's Hospital

Assistant Professor of Neurology, Harvard Medical School

Health and Policy Advisor in Neurology, Partners In Health

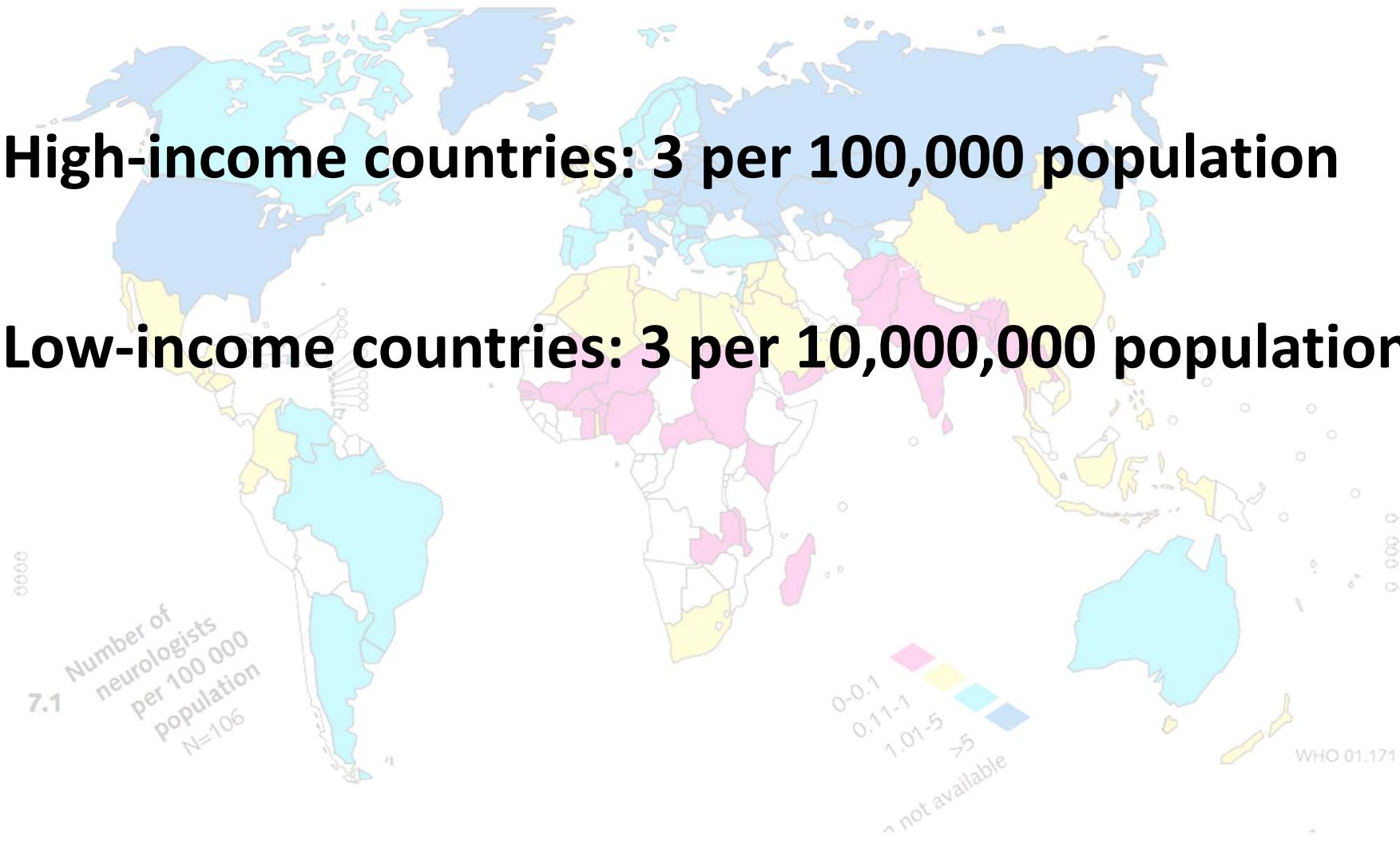
Worldwide Distribution of Neurologists



WHO Atlas: Country resource for neurological disorders, 2004

Worldwide Distribution of Neurologists

- High-income countries: 3 per 100,000 population
- Low-income countries: 3 per 10,000,000 population



Neurology in Resource-Limited Settings

- Care of patients with neurologic conditions falls on primary care providers
- Primary care providers in countries with few or no neurologists receive no formal training in neurology

Neurology and Global Health

Mission(s) impossible

- “Mission” model may be effective for surgeons, but not neurologists
- Neurologists are most effective in global health as *consultants*

Neurology Residents and Global Health

- Residents want to *go* and help care for patients
- Residents may not have adequate clinical experience to function independently
- Residents may find it challenging to adapt to local epidemiology and resource limitations in a short elective

LETTERS TO
THE EDITOR

FROM THE FRONT LINES OF ETHIOPIA: A PLEA FOR THE GLOBAL HEALTH SECTION TO RECONSIDER PRIORITIES

- ...*a striking example of international medical paternalism — improperly assuming that short-term visits by American neurology residents are helpful to the host country. Nothing could be further from the truth. There may be potential indirect benefits in select circumstances, such as increased exposure leading to advocacy that may generate future aid. In general, however, visitors do not recognize the local needs, are unfamiliar with cultural differences, and are ill-suited to providing any meaningful care...*
- *One-off visits for grand rounds, lectures, or clinic attendance are tantamount to international doctor tourism — an educational holiday for the visitor, but extraordinarily disruptive to the host program... It is important to recognize that one- off visits secure one-sided benefits for the sending institution — these visits do not provide any substantive benefit to the host nation.*
- *The only way to ensure sustainable growth of neurological care in developing nations is to promote capacity building through stable, long-term partnerships offering regularly scheduled teaching visits, reciprocity of training, and appropriate educational donations in a coordinated fashion. The needs should be determined in conjunction with the host, rather than outsiders imposing their views. (emphasis added)*

Residents as Educational Collaborators in Resource-Limited Settings

- Academic residency training cultivates residents as educators
- Educational collaborations are not limited to brief on-site visits
- Participating in neurology education collaborations with colleagues in resource-limited settings allows for **bidirectional** education

Residents as Educational Collaborators in Resource-Limited Settings

- On-site (“away rotations”)
- Remote online support (tele-neurology)
- Development of educational resources, protocols, etc.

On-site rotations/electives

- Importance of pre-departure preparation:
 - Preparation and discussion of educational materials
 - Discussion of context, limitations, etc.
 - Discussion with host institution
- Importance of precepting/mentorship
 - On-site neurologist (local or visiting)
 - On-site non-neurologist (other departments)
 - On-site non-governmental organization (NGO)

Tele-Consultation

- Residents gain understanding of common and uncommon neurologic cases and their evaluation/management in resource-limited settings
- Residents staff with attendings
- Residents provide educational consultation back to providers

CME Modules



Harvard Medical School
Department of Continuing Education

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Stroke Management in Low-Resource

Settings

[Log-in to Register](#)

[Course Description](#) | [Faculty](#) | [Accreditation](#) | [General Information](#)

Course Description

This activity aims to educate health care professionals on the appropriate management of stroke in low-resource settings. Stroke is the cause of significant morbidity and mortality worldwide, constituting 4.1% of disability-adjusted life years (DALYs) lost worldwide, making it the 3rd highest cause of DALYs lost (Murray, 2012). Data on the impact of stroke within Haiti itself are limited by poor public health infrastructure, but the latest figures from the Pan-American Health Organization put stroke as the 3rd highest cause of death within the country, behind AIDS and diarrheal diseases (PAHO). There exist comprehensive guidelines in stroke management (AHA/ASA guidelines), however these guidelines assume ready access to advanced diagnostics (notable CT scanners) and the ability for intensive monitoring (such as frequent nursing checks and arterial lines).

Original Release: 4/1/2014
Most Recent Update: 4/1/2014
Termination Date: 4/1/2017

NUMBER OF CREDIT HOURS: The Harvard Medical School designates this enduring material for a maximum of 1 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This course should take approximately 1 hours to complete.

COST: \$25.00 for the average learner. Participants living in emerging nations may register for free. Please see our [International Pricing page eligible countries](#).

OVERALL LEARNING OBJECTIVES:

Upon completion of this activity, participants will be able to:

- Provide resource-appropriate management for strokes of unclear etiology (as most stroke patients in Haiti will not have a CT scan performed)
- Counsel patients effectively on primary and secondary stroke prophylaxis
- Identify the most important modifiable risk factors for primary and secondary stroke
- Identify public health and public policy measures that have been employed in middle income countries to reduce the risk of stroke

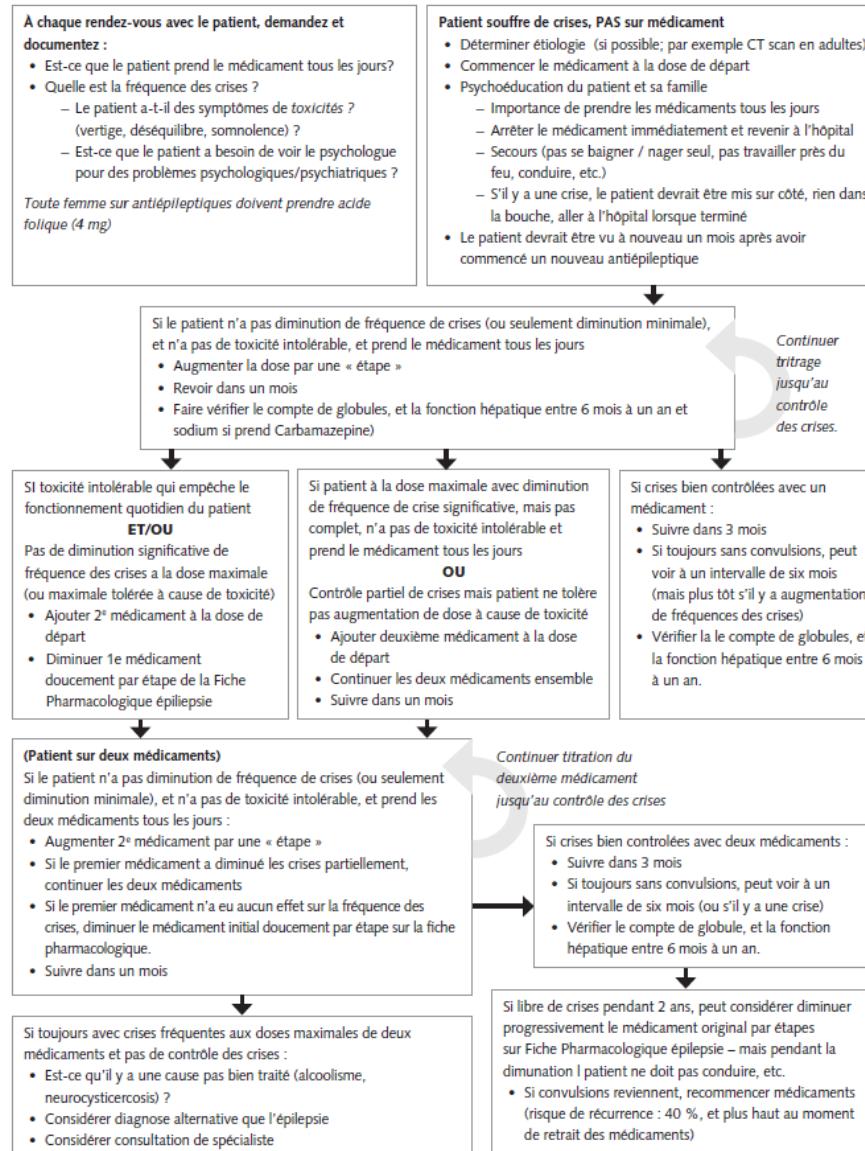
METHOD OF PARTICIPATION:

Registrants participate in the learning process by answering interactive multiple choice questions that are dispersed throughout the case presentation. You must answer a question correctly in order to continue

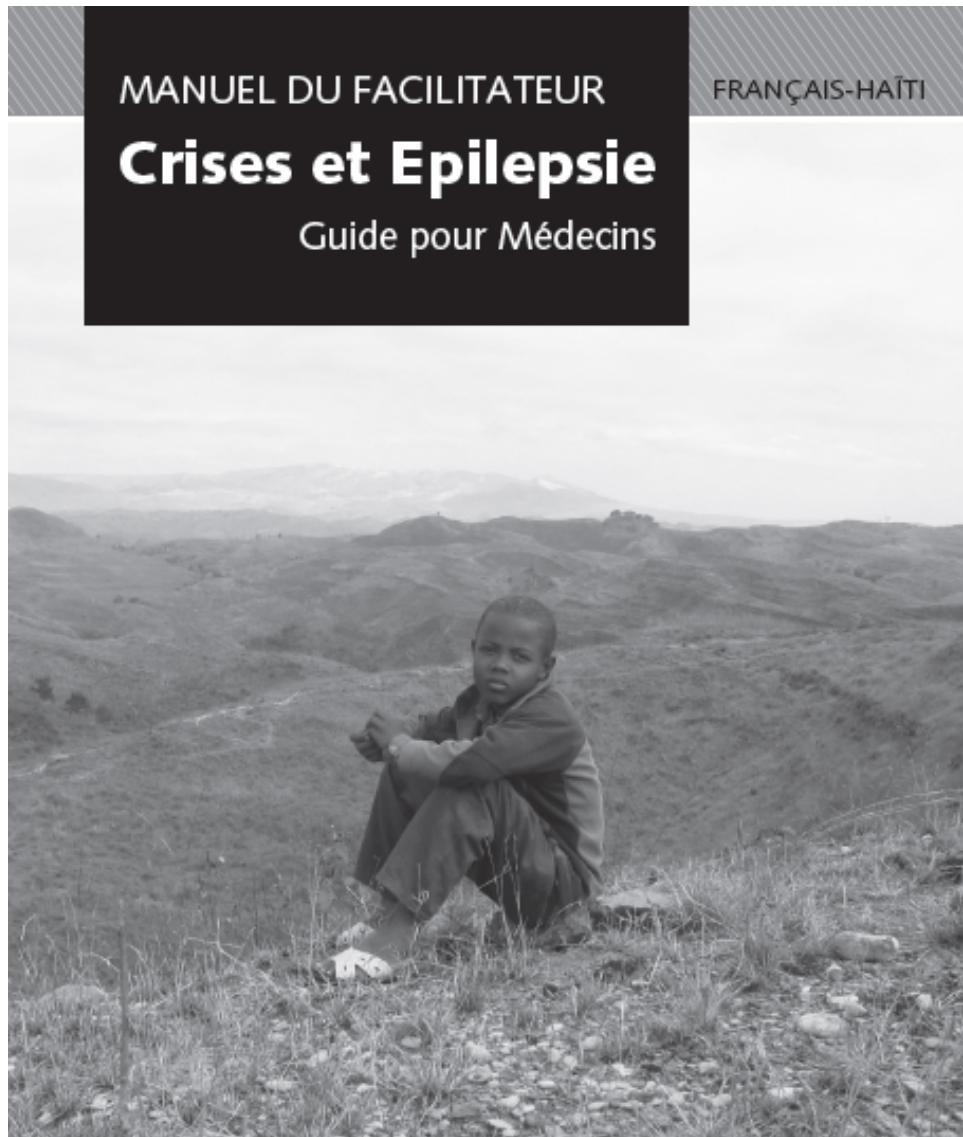
http://cmeonline.med.harvard.edu/course_descriptions.asp?Course_id=217&group_name=Neurology

Protocols

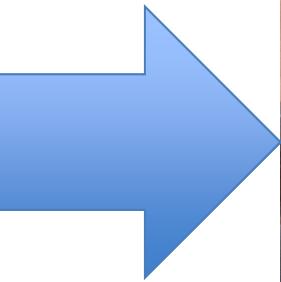
GUIDE POUR TITRAGE DES MÉDICAMENTS DES PATIENTS ATTEINTS D'ÉPILEPSIE



Protocols



Capacity-Building



Neurology Residents as Educational Collaborators in Resource-Limited Settings

- Provide mentored, longitudinal neurology education for providers in settings with no access to neurologic training
 - On site
 - Tele-consultation
 - Development of educational materials and protocols
- Provide collaborative experience for residents seeking to understand the practice of neurology in resource-limited settings