European Medical Specialist Review
Official Publication of UEMS | Vol.01, Issue 01, 2026

The World Federation of Neurology: Educational Experiences in Africa

Authors
Wolfgang Grisold[1,*], Steven L. Lewis[2]
ORCID: Wolfgang Grisold: 0000-0003-0593-1704 | Steven L. Lewis: 0000-0002-0233-3154

Received: 22 April 2026
Accepted: 29 April 2026
Published: 22 May 2026

[1] Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Donaueschingenstraße 13, A-1200 Vienna and OEAK Arztakademie, Austria.
[2] World Federation of Neurology, London, UK.

Corresponding author: Wolfgang Grisold, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Donaueschingenstraße 13, A-1200 Vienna and OEAK Arztakademie, Austria.

Abstract

The World Federation of Neurology (WFN) fosters neurology and brain health worldwide. Education is one of the core activities of the WFN, which has developed several programs over the decades. This review will cover three WFN educational programs with a particular focus on Africa. The first are individual-based programs, designed to promote individual training, either as full training, one-year fellowships, or individual support for projects, congress visits, and grants for educational projects. WFN also supports general educational programs, intended to deliver materials to broader audiences. These efforts span continuing medical education, e-learning hubs, live and recorded virtual educational courses, and an open access journal, eNeurological Sciences. Finally, this review will describe the WFN's Global Advocacy and Leadership Training (GALP) program, delivered jointly with the American Academy of Neurology. GALP provides education and mentorship in "soft facts", such as advocacy and leadership for young neurologists from low and low-middle income countries. GALP trains young neurologists in advocacy initiatives to improve neurologic care and brain health in underserved regions. These educational efforts are crucial to build neurology capacity in Africa as well as develop continuing medical education, which is currently limited by the lack of joint program accreditation and mutual agreements.

Keywords: Advocacy, education, individual promotion, leadership, training programs.

Introduction

The World Federation of Neurology (WFN) has 126 member societies and aims to foster neurology and brain health worldwide. Economically, according to the World Bank Classification, countries are divided into high-income, high- and low-middle-income, and low-income countries (1). A more recent classification distinguishes between the global North and South, the so-called "Brandt line" (2). Neurologic care is often unavailable or insufficient in many low-middle- and low-income countries. Africa, with 1.4 billion inhabitants and a rapidly growing population, also has a high burden of neurological illness, including stroke, neonatal encephalopathy, migraine, meningitis, dementia, diabetic neuropathy, and epilepsy, which are among the top conditions in sub-Saharan Africa, according to the Global Burden of Disease (GBD) study (3). Of all global regions, age-standardised disability-adjusted life-year (DALY) rates from neurological disease are highest in western (8,190.6 per

100,000 people) and central (7,967.5 per 100,000 people) sub-Saharan Africa (3). The high DALYs in sub-Saharan Africa can be attributed, in large part, to children younger than 5 years of age, and are approximately 18-fold higher versus countries with the lowest DALYs, driven by neonatal encephalopathy, meningitis, and encephalitis (3). This burden and the structure of the continent's age pyramid dictate neurological needs in Africa, as well as its needs regarding neurological educational support for both health professionals and population-based health systems.

The WFN, as the federation of neurological societies worldwide, has been engaged in education projects at many levels in Africa. Financial resources for education are the limiting factor of activities; presently, only the British Neurological Association (ABN) regularly directly contributes to the costs of the WFN Training Centre in Cairo and proceeds from the International Congress on Neuromuscular Diseases (ICNMD) (4) contribute to one additional neuromuscular trainee in Rabat each year. The WFN and its member societies bear all other costs.

History of WFN Education Programs in Africa

The WFN has been proactive in training and education over decades. Individual travel grants and congress bursaries mainly support inhabitants from low-income countries. Since 2013, the WFN has installed the concept of WFN Training Centres, which launched in Rabat, Morocco. The concept was based on an application by centres, followed by evaluations like the European Union of Medical Specialists (UEMS) structured department visits. Since 2013, three more Training Centres in Cairo (Egypt), Dakar (Senegal), and Cape Town (South Africa) have been opened and offer presently three full (4-year) training positions in neurology and several one-year fellowships, including general, neuromuscular, stroke, and epilepsy. Another WFN Training Centre has been active in Mexico for Latin American trainees and follows a similar structure and currently provides subspecialty training in stroke.

At the same time, 4–6-week department visits were offered by some European countries, as well as Canada and India. The concept of the department visit program has been to expose trainees and young neurologists, through short visits, to different health systems, and to offer a platform for future collaboration and exchange. Although efficient, this concept is significantly challenged by the rise in travel difficulties, including increasingly complex visa application procedures.

Given the large population of Africa, WFN activities are exemplary and important, but not sufficient to cover the needs of education in neurology. However, since 2011, the total number of all training positions in Africa has increased, with the successful implementation of neurology training at several universities, which may have been stimulated by the WFN program. It also needs to be pointed out that several centers in Africa have produced a fair number of trainees on their own. From our point of cooperation, we wish to mention Dakar, Senegal and Cape Town, South Africa in particular, whose impressive figures were presented at the African Academy of Neurology (AFAN) meeting in Senegal in 2024 (5).

Africa is far from homogeneous. In addition to the regional differences of North Africa, sub-Saharan Africa, and South Africa, which show a diversity of neurological care density and facilities, there are strong cultural differences. One major factor are the differences between the English-speaking and French-speaking African countries, as well as the Portuguese-speaking fraction. The language is usually associated with the academic system, and, in neurology, with differences in the training curricula.

Health care systems are dependent on finances, and structures of neurology require large investments in medical personnel, facilities for outpatients and inpatients, and general health coverage. Although the awareness of neurological needs seems to be increasing, it is still not prioritised in many countries. It is hoped that the recent World Health Organization (WHO) effort, the Intersectoral Global Action Plan for Epilepsy and Other Neurological Diseases, initiated in 2022, will help improve this situation. The WHO Africa meeting 2025 in Lusaka had no specific neurology-focused topics, apart from projects such as meningitis, malaria, and rehabilitation in the general sense.

One overarching concern in education, voiced by many, is “brain drain”, the tendency to leave one’s country or continent of origin for another location to improve working conditions. The hope and intention of the WFN program is to be able to train and recruit regional persons, and, at the same time, empower regions to continue to develop education and training (i.e., “training the trainer”) in neurology and its subspecialties. The WFN has launched the “White book on Global Neurology”, which comprises neurology structures and related fields, and also focuses on suggested education structures (6). The WFN has devoted three categories to promoting education in Africa, outlined in the ensuing sections.

Individual-based programs

WFN has a long tradition of supporting education worldwide. The concept of Junior Travelling Fellowships (7) and congress bursaries for WFN meetings has occurred over decades. The concept is to support young neurologists, particularly from low- and low-middle income countries, to participate in high-level global congresses and meetings and encourage them to submit a presentation or a poster. The congress bursaries are dedicated to the WFN’s own World Congress of Neurology (WCN), which will be held annually from 2027 onwards. Several participant reports can be viewed in World Neurology, the newsletter of the WFN (8). A broader scale are grants, which were initiated over 10 years ago and have undergone several changes in past years. Grants are predominantly targeted at educational projects promoting and implementing neurology worldwide. Ideally, these grants are also aimed at scientific and other research projects (9). Further promotion and development are possible but are limited by the financial possibilities of the WFN.

Global general education

The task of the WFN educational program is to educate young neurologists in contemporary aspects of neurology. This is achieved by: a) short-term visits, b) one-year fellowships and full training (4 years), and c) regional and global educational days. The present WFN programs are mainly centred on Africa (particularly sub-Saharan Africa); however, educational activities in other regions and continents, such as within Central and South America and Asia, are equally important.

Department visits

These are short-term educational visits mainly intended for young neurologists from low- and low-middle-income countries and consist of a 4–6-week visit to an internationally renowned neurology department (Table 1). The participant’s status is that of an observer, and the aim is to observe and experience different health systems, diagnostics, and neurological therapies. This program is successful and has been offered by departments from member societies in Austria, Germany, Italy, Norway, Poland, and Turkey for young neurologists from Africa, and also by Canada for young neurologists from Latin America. A recent department visit was hosted by India for young neurologists from Asian countries. Over the years, at least 50 people have participated in the department visit initiative.

WFN Training Centres

The WFN Training Centres offer neurology training either as a fellow (one-year post-residency subspecialty or additional general neurology training) or for full, four-year neurology training (Table 1). To become a WFN Training Centre, the institution has to apply and then receives a visit from a WFN commission, which assesses the centre, including through conversations with the hospital director, dean, department chair, faculty, and trainees. All WFN Training Centres have a comprehensive training curriculum and are embedded in a teaching hospital. The pattern of evaluation and the WFN site visits are based on the UEMS document (10, 11).

The current situation allows for 4-year training at three sites, and one-year training at all sites devoted to subspecialities. The initial suggestion for one-year post-residency training was an additional year of general neurology training, and increasingly, subspecialty training, such as neuromuscular disease, epilepsy, and stroke have been requested and initiated. Regarding the numbers of attendees, the Rabat Training Centre has been most successful. Through the support of ICNMD proceeds, we were often able to train two neuromuscular fellows at the same time.

The WFN Training Centres consume a lot of administrative work, such as registration, financing, applications of trainees, selection process by committees, and financing and funding of the trainees. These projects are almost entirely financed by the WFN, and most work is accomplished by the London office with help from other individuals on a voluntary basis. We are also ensuring in all exchange programs that safe travel and housing is provided, and persons have health insurance as well as professional indemnity clearance for their stay. We have often been asked to provide accommodation to additional people and trainees' family members. Although this is understandable from the humanistic point of view, the WFN is unable to help in these complex matters, which usually deal with immigration laws and legal issues, and, in addition to administrative costs, would also raise the level of responsibility and liability for the WFN.

Despite all efforts, the neurological community in Africa has raised several points of critique: a) the number of trainees is too small, b) the number of WFN Training Centres could be expanded, c) additional subspecialties rather than general training are requested, and d) academic exchange programs with other (non-WFN) universities should be established. The German Society of Neurology (DGN) requested that also Europeans should be a part of the WFN program to visit African centres. Although this was not in the original concept of the Training Centres, the idea is presently being explored, and a pilot program is presently preparing for the visit of a young DGN member to Africa for an observership. This would probably increase the understanding of European neurologists about the situation in Africa and increase knowledge of specific neurological conditions in Africa, such as tropical infections and trauma.

Other regional and global general programs

Continuing medical education (CME) and continuous professional development are mainly under the authority of the region, and particularly the country. Europe's example of the UEMS European Accreditation Council for Continuing Medical Education (EACCME) could be an important template for Africa's need to provide generally accredited CME. The WFN has CME programs, such as Educational Days and the WCN congresses. The WFN strongly encourages neurological CME activities. For the WFN congresses, UEMS EACCME accreditation is ensured, which is also accredited by the American Medical Association (AMA) and the Royal College of Physicians in Canada.

The WFN Educational Days were initially devoted to Africa and then extended to Asia. The concept is to organize a one-day virtual, high-quality event, highlighting relevant diseases, such as stroke, movement disorders, peripheral neuropathies, autoimmune diseases, epilepsy, etc. The faculty is composed of WFN faculty that cooperates with specialist societies as well as members of the local neurological association (i.e., AFAN for Africa and the Asian Oceanian Association of Neurology for Asia). These events are free to attend, available globally, and have been successful. The financial costs, including the portal and administration, are covered by the WFN only. All international speakers participate for free. A very successful African Headache Day was hosted for several years, at first in cooperation with the International Headache Society Global Patient Advocacy Coalition (12).

The WFN holds a joint program with the American Academy of Neurology (AAN), called Continuum (13), which is a permanent, high-quality update on content and procedures in neurology. This can be assumed to be the ideal material for global updates and CME on clinical neurology. Originally published only as a print journal, it is now also fully published and archived online. The WFN ensures that the material is distributed among low-middle- and low-income countries. Local organizers validate learning groups' discussions of content and distribute the final certificates of attendance.

The WFN participates in the European Academy of Neurology (EAN) Regional Teaching course program (14). This EAN program provides regional teaching courses, which have been successfully provided and organised by the EAN. The WFN participates in the funding of these events (15). The WFN has an open access journal, eNeurological Sciences (eNS) which disseminates scientific content. A virtual platform, the WFN Digital Neurology Update (WNU) course (16) was established as a virtual update platform in 2024 (17). Excellent faculty have been recruited to speak at these meetings. Following this, a series of open access articles are published in the eNS, available for download (18).

Advocacy and Leadership

Advocacy has become an important task for all issues in neurology (19). Training and teaching advocacy and leadership has been practiced formally by the AAN since 2002 with the Palatucci meetings and several other leadership initiatives. The WFN and the AAN drafted a Global Leadership Program (GALP) to provide a training curriculum for young neurologists from low-middle- and low-income countries (20). This program hosted two live events (at the AAN annual meeting in San Diego, USA and the WCN meeting in Seoul, South Korea), and a series of virtual training units with mentor contacts. The first GALP course took place in 2025. Out of 100 applicants, 20 were selected, and 15 graduated in Seoul. Although a successful model, there are several issues, such as financing, measurable outcomes, and the continuing discussion of whether "soft fact"-based advocacy needs to be implemented in training.

A high-class faculty delivered training, and the live events were always attended as a useful platform of exchange. In contrast to the in-person events, the series of virtual meetings lacked enthusiasm, which was obvious from the participation. For the virtual sessions, a better and more efficient electronic training concept will be needed in the future. In addition, both the AAN and the WFN did not highly advertise, promote, or publish this high-stakes event, which might have been a missed opportunity.

Conclusion

The WFN is actively engaged in education in Africa. Education needs are defined by the frequency of neurological diseases (3), the rapidly growing population in Africa, and the small number of neurologists and, in a wider sense, neurological services. WFN activities are grouped into individually

based support, global education, advocacy and leadership. All WFN educational tools are well balanced and have a variable history; the Continuum program and individual sponsorships have a long tradition; Department Visits and Training Centres now have a track record and experience for over 10 years; and more recently implemented are the Educational Days and also GALP.

All educational programs have advantages and disadvantages, which are continuously monitored by the education committee and the WFN administration; sustainability and financial independence are important and successful cooperation with other organizations, such as the ABN, ICNMD, and the AAN, need to continue.

The projects require detailed work, and strong administrative support is needed from the WFN office. The interaction with societies, institutions, faculties, and individuals has a high-risk potential for irregular or failed interactions. We are proud to say that incidences are rare, albeit unavoidable, and we had hardly any violations and misuse by program participants. We also had excellent experiences with our partnering Training Centres, where language, administration, hospital and university programs, and national regulations can be challenging.

WFN's worldwide educational programs, with a focus on low-middle- and low-income countries, are a successful and powerful tool to promote neurological education in Africa at several levels. Future development can include increased activities from European UEMS countries and participation will be welcome.

Declarations

Conflict of Interest: The authors declare no conflict of interest.

Funding: There was no funding for this work.

References

1. World Bank. World Bank Country and Lending Groups [Internet]. Washington (DC): World Bank Group; 2026 [cited 2026 Apr 16]. Available from: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.
2. Blamo A, Käser F. Global North – Global South. Guide for Global Research Partnerships (GRP-Alliance). Swiss Academy of Sciences (SCNAT); 2025. Available from: https://globalresearch.scnat.ch/en/grp-guide/in_depth/global_north_global_south.
3. Collaborators GBDNSD. Global, regional, and national burden of disorders affecting the nervous system, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. Lancet Neurol. 2024.
4. International Congress on Neuromuscular Diseases (ICNMD). ICNMD 2026 [Internet]. Vancouver (BC): ICNMD; 2026 [cited 2026 Apr 16]. Available from: https://icnmd.org/.
5. World Federation of Neurology. Joint Congress of the African Academy of Neurology (AFAN) and the Senegalese Association of Neurology 2024 [Internet]. Dakar: Azalaï Hôtel; 2024 [cited 2026 Apr 16]. Available from: https://wfneurology.org/activities/calendar/joint-congress-afan-san-2024.
6. Grisold W, Lewis SL, Guekht A, Gouider R. The White Book on Global World Neurology Structure, Workforce, Capacities, and Procedures of Neurology. 1st ed. Springer Nature; 2026.
7. World Federation of Neurology. Junior Travelling Fellowships [Internet]. London: WFN; 2026 [cited 2026 Apr 16]. Available from: https://wfneurology.org/activities/education-grants-and-awards/junior-travelling-fellowships.
8. World Federation of Neurology. World Neurology [Internet]. Kansas (US): Ascend Integrated Media LLC; 2026 [cited 2026 Apr 16]. Available from: https://wfneurology.org/publications/world-neurology.

9. World Federation of Neurology. WFN Grants and Awards [Internet]. London: WFN; 2026 [cited 2026 Apr 16]. Available from: https://wfneurology.org/activities/education-grants-and-awards.

10. Grisold W, Lewis SL. Teaching centers of the World Federation of Neurology - A concept to provide training resources from within. J Neurol Sci. 2017;379:25-8.

11. Union Européenne des Médecins Spécialistes (UEMS). Charter on the Visitation of Training Centres (1997). Brussels: UEMS; 2006. Available from: https://www.uems.eu/documents.

12. Grisold W, Dodick DW. Headache advocacy. eNeurologicalSci. 2023;32:100472.

13. Continuum: Lifelong Learning in Neurology. Continuum [Internet]. Minneapolis (MN): American Academy of Neurology; [cited 2026 Apr 17]. Available from: http://www.continuumjournal.com/.

14. European Academy of Neurology. Regional Teaching Course [Internet]. Vienna: EAN; 2026 [cited 2026 Apr 17]. Available from: https://www.ean.org/learn/educational-events/regional-teaching-course.

15. Patel Y. The 15th Regional Training Course for Sub-Saharan Africa [Internet]. World Neurology Online; 2026 Feb 25 [cited 2026 Apr 17]. Available from: https://worldneurologyonline.com/article/the-15th-regional-training-course-for-sub-saharan-africa/.

16. Grisold W, Lewis SL. The world federation of neurology digital neurology update (WNU). eNeurologicalSci. 2025;38:100548.

17. World Federation of Neurology. eNS Journal Special Issue on the WFN Digital Neurology Updates (WNU) 2024 [Internet]. 2025 Mar 4 [cited 2026 Apr 17]. Available from: https://wfneurology.org/activities/news-events/archived-news/2025-03-04-wfn-ens-wnu.

18. Elsevier. ScienceDirect Special Issue [Internet]. Amsterdam: Elsevier; [cited 2026 Apr 17]. Available from: https://www.sciencedirect.com/special-issue/10L3PMK10LG.

19. Grisold W, Struhal W, Grisold A. Advocacy in Neurology. OUP Book. 2019.

20. World Federation of Neurology. AAN–WFN Global Advocacy Leadership Program [Internet]. London: WFN; [cited 2026 Apr 17]. Available from: https://wfneurology.org/education/galp.