

# Global Neurosurgery: the role of WFNS Foundation

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The World Federation of Neurosurgical Societies (WFNS) is the largest neurosurgical organization gathering more than 49,000 neurosurgeons belonging to almost all existing neurosurgical societies worldwide, created in 1955 to promote neurosurgery camaraderie among neurosurgeons. In 90's beginnings, the visionary leadership of professor "Pepe" Martin-Rodriguez and professor Madjid Samii made possible the creation of the WFNS Foundation; its mission can be defined as an improvement of neurosurgical care in developing countries (education, training and, intraoperative neurosurgical technology), with the vision to become the worldwide leader neurosurgical organization in the promotion of education and neurosurgical care in that countries. It is essential to mention the name of Professor Armando Basso, who exemplarily created the modern and current Foundation structure that nowadays is helping thousands of patients and neurosurgeons.

The Executive Board governs the WFNS Foundation (seven persons, three of them being the President, Secretary, and Treasurer of WFNS). Also, it has the support of the Advisory Board, composed of a group of neurosurgeons who enthusiastically contribute to WFNS Foundation goals. A few years ago, a strategic plan was devised considering the Foundation's activity based on three pillars: Education, the development of a network of training centers, and the provision of neurosurgical equipment to developing countries. Recent publications (1–6) have pointed out the current unmet needs in developing countries, hence the interest of WFNS Foundation to comply with the context and definition of Global Neurosurgery ("the clinical and public health practice of neurosurgery with the primary purpose of ensuring timely, safe, and affordable neurosurgical care to all who need it").

Education has been one of the essential activities of the Foundation. Prominent neurosurgeons have altruistically participated in hundreds of courses in remote areas of developing countries. These educational activities have been led by the Education and Training Committee (A. de Sousa, Y. Kato, I. Germano, H. Kinouchi, S. Kuroda) with many colleagues all around the world. Under whose umbrella and directed by professor Choux and professor Di Rocco, the Hydrocephalus Project has been arranged in Africa and East Europe. Lectures, hands-on activities, built and equipped operating rooms have been organized under that project's initiative. It is also important to mention how the scientific committees (covering all fields in Neurosurgery) are synergically acting and participating in the educational goals of the Foundation.

One of the most appreciated initiatives has been establishing a network of training centers under several categories. The "Full Program Training Centers" are in Africa and Latin America, being the first Rabat Center. Young doctors from developing countries are accepted to be fully trained in Neurosurgery. WFNS Foundation provides the necessary scholarship for that purpose with some exceptions (Curitiba, Recife). Very robust and ambitious programs support this important way of neurosurgical education (Africa 100; professor Samii). Recently a new program of training in China for African doctors has started under the direction of Dr. Ling Feng and Dr. M. Qureshi.

After finishing the training period, the young neurosurgeons commit to returning to their countries and contributing to neurosurgery development or creating a new unit. Another category of training center is called "Postgraduate Training Center." Young residents worldwide can spend a few months in one of the 30 centers that waive food and accommodation and even provide some scholarships to help; it is a popular program whose application is made online at WFNS.ORG. Unfortunately, one of the consequences of the COVID pandemic has been the temporary suspension of that program due to restrictions to travel.

Provision of instruments and equipment (microscope, drill, bipolar coagulation, endoscope) donated by the Foundation to potentiate the neurosurgical activity in remote areas or even create neurosurgical units ("targeted program") is the third decisive effort of WFNS Foundation to contribute to Global Neurosurgery. After the training in a "Full Training Centers," the neurosurgeon receives complete equipment and instruments to be initiated a unit in one of the areas that previously did not have that kind of health care.

Under the umbrella of the WFNS, several committees are playing a crucial role: the education mentioned above and training but also the Young Neurosurgeons Forum (I. Esene), and the recently created Global Neurosurgery Ctte (K. Park; A. El Ouahabi), being the nascent Journal of Global Neurosurgery, a wonderful initiative creating a perfect scenario to gather of all necessary efforts and initiatives that indeed will contribute to the improvement of the neurosurgical care all over the world.

**REFERENCES**

1. Mukhopadhyay S, Punchak M, Rattani A, Hung Y-C, Dahm J, Faruque S, et al. The global neurosurgical workforce: a mixed-methods assessment of density and growth. *J Neurosurg.* 4 January 2019;1-7.
2. Robertson FC, Esene IN, Koliass AG, Khan T, Rosseau G, Gormley WB, et al. Global Perspectives on Task Shifting and Task Sharing in Neurosurgery. *World Neurosurg X.* April 2020; 6:100060.
3. Kanmounye US, Ammar A, Esene I, El Ouahabi A, Park K. Letter to the Editor: COVID-19 & Neurosurgical Training in Low- and Middle-Income Countries. *World Neurosurg.* October 2020; 142:566-8.
4. Kanmounye US, Lartigue JW, Sadler S, Yuki Ip HK, Corley J, Arraez MA, et al. Emerging Trends in the Neurosurgical Workforce of Low- and Middle-Income Countries: A Cross-Sectional Study. *World Neurosurg.* October 2020;142: e420-33.
5. Ham El, Kim J, Kanmounye US, Lartigue JW, Gupta S, Esene IN, et al. Cohesion Between Research Literature and Health System Level Efforts to Address Global Neurosurgical Inequity: A Scoping Review. *World Neurosurg.* November 2020;143: e88-105.
6. Rosseau G, Johnson WD, Park KB, Hutchinson PJ, Lippa L, Andrews R, et al. Global neurosurgery: continued momentum at the 72nd World Health Assembly. *J Neurosurg.* 17 January 2020;132(4):1256-60.