

Working Out of the Silo of Global Neurosurgery

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Introduction

The field of global surgery has gained attention since the publication of the Lancet Commission landmark report in 2015[1]. The authors estimated that 5 billion people worldwide do not have access to safe, affordable surgical and anesthesia services [2]. The paper “Global Neurosurgery: The Unmet Need,” published in 2016, launched the modern global neurosurgery era by advocating for the system-level thinking and programs required to address limited neurosurgical care in low-resource settings [3].

At present, many individuals, academic institutions, governmental agencies, and nongovernmental organizations (NGOs) are involved in the global neurosurgery movement. These include the Program in Global Surgery and Social Change at Harvard Medical School, Duke Global Neurology and Neurosurgery, Weill Cornell Tanzania Neurosurgery Project, CURE Children’s Hospital of Uganda, and the Virtue Foundation in Mongolia [4]. Nonetheless, as global neurosurgery efforts continue to expand, it is essential to align global neurosurgery activity in order to prevent duplication of efforts [4].

In 2019, the World Federation of Neurosurgical Societies (WFNS) established the Global Neurosurgery Committee (GNC) to promote access to safe, affordable, and timely neurosurgical care worldwide [4]. The GNC initially included five primary objectives – Amplify, Align, Advance, Assimilate, and Advocate – with the sixth objective, Communication, added in 2021 [4]. In this manuscript, we provide an update on the Align objective team.

Importance

The purpose of the Align team was to align global neurosurgery activity. Developing a cohesive strategy to broadly improve access to neurosurgical care is essential to optimize the efficiency and efficacy of any action. A core aspect of this objective is collaboration, given the necessity of combining the knowledge, experiences, and skills of a diverse array of partners to develop

solutions to the global burden of neurosurgical disease. Large-scale, multilateral, multinational collaboration in clinical practice, research, education, and advocacy is imperative to address the immense challenges faced in global neurosurgery [5,6].

Targets & Goals

To achieve the objective of aligning global neurosurgical activities, four targets were set to enhance collaboration, coordination, and communication strategically.

Target A was establishing a platform for communication, reporting, and dissemination of global neurosurgery information. Such a platform is crucial to foster the free flow of information and knowledge to allow healthcare professionals to provide high-quality neurosurgical services and ensure that patients have access to safe and affordable care in both HICs and LMICs [7]. Since 1955, the WFNS has played a remarkable role in improving neurosurgical care and building neurosurgical capacity worldwide through education, training, technology, and research [8]. In addition, as a non-state actor in official relations with the World Health Organization (WHO), the WFNS has created multiple international partnerships with countries and global health agencies. Our first step to fulfilling this target was to create the Global Neurosurgery Committee website and incorporate this site within the larger WFNS site to promote global neurosurgery initiatives and provide a comprehensive, accessible source of information.

Target B was to create an interactive platform to match needs and opportunities. Each year, over 5 million patients with treatable neurosurgical conditions are unable to undergo operative intervention. In addition, there are gross neurosurgical workforce disparities and significant geographic treatment gaps, especially in Africa and Southeast Asia [9]. Therefore, our team decided to partner with an interactive online platform, “InterSurgeon,” to connect global surgery stakeholders internationally to address these disparities globally.

Target C was adopting the Global Neurosurgery Action Plan to obtain >70% endorsement amongst WFNS member societies. We hoped to create a clear and concise action plan that delineates the five objectives and targets of the GNC for distribution to WFNS member societies. By endorsing the action plan, member societies supported the GNC in its commitment to achieving these targets by March 2022 to report at the World Congress of Neurosurgery in Bogotá, Colombia.

Target D was the coordination of the development of strategic plans for quality neurosurgical services. We hoped to initiate discussion and develop strategic plans with countries with apparent deficits in neurosurgical services, such as those with the lowest number of neurosurgeons. Global neurosurgery is a multi-dimensional movement with strategies such as surgical camps, training, education, and health system strengthening [5]. Inevitably, there are systemic issues and challenges specific to each LMIC. Consequently, there is no single best strategic plan that may be applied in all LMICs. With this target, we aimed to identify five

countries with wide neurosurgical workforce gaps and to initiate the discussion with local stakeholders to develop context-specific long-term strategic plans.

Organization

The Align team Committee consisted of 10 neurosurgeons from 8 countries, while the Secretariat team consisted of 3 members from 3 countries (Table 1). Junior Committee members also joined once the Junior Committee was formed in April 2021. The Align team organized its efforts through online meetings. In addition, the team met monthly to discuss progress and action items for the targets. Members of the team assigned to specific projects also met separately with members of the Committee, local neurosurgeons, and other stakeholders as needed. The 3 Secretariat members coordinated all meetings and delegated tasks.

Progress

The Align team had notable achievements. For Target A, a global neurosurgery website (www.globalneurosurgery.org) was created through the Harvard Global Neurosurgery at the Program for Global Surgery and Social Change at Harvard Medical School. The newly created website was officially incorporated into the WFNS site (<https://www.wfns.org/committees>). For Target B, the team assisted in creating InterSurgeon (www.InterSurgeon.com), a free interactive online platform designed to connect individuals and organizations in global surgery via a matching algorithm. The goal of InterSurgeon is to facilitate long-term collaborations to increase surgical capacity globally. InterSurgeon now includes 800 individual and 40 organizational members in over 100 countries, involving most surgical subspecialties, anesthesia, and obstetrics. A study summarizing the prior experience of InterSurgeon demonstrated partnerships between high-income and low- and middle-income (LMIC) actors and between multiple LMIC actors [10]. Finally, for Target C, the Align team drafted a Global Neurosurgery Action Plan. Although the Global Action Plan adoption goal threshold by >70% among WFNS member societies was not yet fully achieved, the Global Action Plan was successfully endorsed by 37 out of 134 member societies (28%).

For Target D, the Align team sought to initiate strategic planning for neurosurgical capacity in Tanzania/Zanzibar, Afghanistan, Myanmar, Sudan, Bolivia, Sierra Leone, and the Caribbean. Concept notes to summarize the strategic plans were signed by local neurosurgeons in Tanzania/Zanzibar, Afghanistan, Sudan, Myanmar, and the Caribbean, while the concept note was in progress for Bolivia. In Tanzania/Zanzibar, strategic planning was underway to improve neuro-nursing care, expand neurosurgical facility locations, and obtain equipment. Regarding Afghanistan, strategic planning was in progress to coordinate training centers, revitalize the national neurosurgical research, promote research, and obtain equipment. The focus in Sudan was on expanding virtual and in-person educational opportunities and training opportunities. A site visit was performed to conduct a strength, weakness, opportunity, and threat analysis. Membership in the American Association of Neurological Surgeons was acquired for Sudanese

neurosurgeons, and a “resource book” of key stakeholders in Sudanese neurosurgery was developed. The Sudanese American Bilateral Education Program, consisting of monthly visiting professor sessions and case-based discussions, provided Sudanese neurosurgical residents with educational content [11]. Lastly, efforts were made to contact the Ministry of Health in Sierra Leone to expand neurosurgical capacity.

Opportunity and Challenge

Overall, we completed most of the planned targets, amounting to 87% completion total, the highest percentage among the five targets. Nonetheless, the COVID-19 pandemic provided both a significant opportunity and a substantial challenge to progress. The pandemic promoted greater adoption of virtual meetings, which enabled our team to connect with the neurosurgeons in different countries with different time zones. This was beneficial throughout the strategic planning process by removing geographic and cost-related barriers. However, the primary challenge of the pandemic was the global neurosurgery work was deprioritized in many LMICs as the health systems in these countries scrambled to address the newfound strain from the pandemic.

Group	Name	Country
Committee	Amro Al-Habib	Saudi Arabia
	Andres Rubiano	Colombia
	Gail Rosseau	United States of America
	Indira Devi	India
	Jeff Ntalaja	Democratic Republic of Congo
	Kee B. Park	United States of America
	Mahmood Qureshi	Kenya
	Mbaye Thioub	Senegal
	Salihy Sidi Mohamed	Mauritania
	Tariq Khan	Pakistan
Secretariat	Ho Kei Yuki Ip	Hong Kong
	Nathan Shlobin	United States of America
	Radzi Hamzah	Malaysia

Table 1: Align Team Committee and Secretariat Members

Conclusions

As the global neurosurgery movement continues to advance, thoughtful, well-planned efforts will ensure that initiatives are not conducted in a silo. The Global Neurosurgery Committee was established to organize global neurosurgery initiatives. The Align team has played an essential role in promoting collaborative, coordinated efforts among different stakeholders towards the shared goal of safe, sustainable, and equitable neurosurgical care in LMICs.

Reference

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