

A Seat at the Table: Representation of Global Neurosurgery in the G4 Alliance

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1. | INTRODUCTION

The Global Alliance for Surgical, Obstetric, Trauma and Anaesthesia Care (G4 Alliance, <http://www.theg4alliance.org/>) is the preeminent global surgery advocacy organization (1) dedicated to eliminating disparities in surgical care around the world. A coalition of over 60 non-profit organizations, professional societies, academic centers, and other groups, the G4 Alliance represents civil society interests in global surgery from the grassroots to the international level. The organization convenes its membership to address common interests and concerns, facilitates knowledge and resource sharing, builds consensus and alignment, and conducts outreach with multilateral organizations, donors, and other global health programs and advocacy initiatives. In a sector characterized by diverse actors and fragmentation of care delivery, scholarship, and funding (2,3), the G4 Alliance provides communication and coordination around a common surgical and health system strengthening agenda. The purpose of this paper is to highlight the multiple organizations that specifically contribute to neurosurgical advocacy within the G4 Alliance.

InterSurgeon (www.intersurgeon.org) is an online surgical platform designed by pediatric neurosurgeons William Harkness and James Johnston to facilitate interactions between high-income country surgeons and their colleagues in low- and middle-income countries (4). It was only neurosurgery initially but now includes urology, otolaryngology, non-governmental organizations and will soon include allied health professionals. InterSurgeon is supported by the G4 Alliance and other donors and is a free service to all in the global neurosurgery community. The founders' goals are ambitious: "We hope the collaborations born on this platform will improve surgical care around the world," says Dr. Harkness. Co-founder James Johnston adds, "We are adding important new features all the time, and are particularly eager to develop and share the results from pilot studies we are currently conducting on remote collaboration software for virtual assistance in the operating room."

Founded in 1955, the WFNS has always promoted universal neurosurgical care. The WFNS initially pursued this goal by investing in specialist workforce education and infrastructure. The WFNS has expanded its efforts to include advocacy through its WFNS-WHO Liaison Committee, which has led delegations of neurosurgeons at the World Health Assembly in Geneva in partnership with the WHO Emergency and Essential Surgical Programme and the G4 Alliance (figure 1). One example of current activities is the folate fortification

task force, which advocates for folate fortification regulations to reduce the global burden of spina bifida and anencephaly (5). Another is the Surgery, Obstetrics, Trauma, and Anesthesiology at United Nations General Assembly (SOTA at UNGA) series of webinars that G4 Alliance sponsored at the United Nations General Assembly in September 2020. "The first-ever virtual UNGA allowed G4 Alliance, WFNS and other SOTA specialties to present our shared message online forum, where global surgery advocates directed the content while bureaucrats and diplomats were the intended audiences," according to Gail Rosseau, Chairman of the WFNS-WHO Liaison Committee and a member of the G4 Alliance Executive Committee. The message of the four webinars which were scheduled strategically throughout the UNGA meeting was for global political leaders to work from "Pandemic to Progress," i.e., to use the enormous and unexpected expansion of resources necessitated by the current pandemic to transition to health care systems worldwide that include access to emergency and essential surgery.



FIGURE 1. Members of the WFNS-WHO Committee take a break from WHA meetings in Geneva to add a neurosurgical contribution to a mural honoring health care worker at WHO Headquarters.

In 2019, the WFNS Global Neurosurgery Committee was created to coordinate the neurosurgical societies worldwide efforts to improve access to timely, affordable, quality neurosurgery (www.globalneurosurgery.org). "Neurosurgical representation at the G4 Alliance started when I was invited as an observer to the G4 Alliance Permanent Council (PC) Meeting in December 2015 in Blantyre, Malawi," says Kee Park, MD, MPH, who is now the WFNS Foundation representative to the PC and an acknowledged leader in global neurosurgery (figure 2).

The International Student Surgical Network (InciSioN, <https://incisionetwork.org/>) is an international non-profit organization of 5000+ students, trainees, and early career physicians with 45+ National Working Groups with representation in 80+ countries. InciSioN works towards developing and advancing Global Surgery with our members through advocacy, education, and research. "The G4 Alliance has inspired our network and continues to inform students and trainees about neurosurgical care worldwide. InciSioN and The G4 Alliance have collaborated on multiple advocacy campaigns. One example includes social media coverage of global surgery events at the United Nations General Assembly. The most recent collaboration led to more than 1,000 tweets highlighting global surgery policy, gender equity, and the consequences of COVID-19 on surgical systems. This campaign generated 4 million Twitter impressions over 24 hours. We hope to continually harness the power of social media advocacy for Global Neurosurgery in the future," say MakinahHaq (Vice President of Internal Affairs) and Elliott Taylor (Audiovisual and Communications Team).



FIGURE 2. Global neurosurgery and surgery advocates at the United Nations General Assembly with the World Health Organization Director-General, Dr. Tedros Adhanom Ghebreyesus (center). Standing to his left, Dr. Kee Park, Chair of the World Federation of Neurosurgical Societies' Global Neurosurgery Committee.

FIENS (www.fiens.org) has advocated for and supported high-quality universal neurosurgical care through education. In the last five years, the FIENS has sponsored the education of 23 neurosurgery residents and attendings from underserved communities through the Bassett and Clack fellowships. FIENS has also supported the development and certification of postgraduate neurosurgery residency programs in partnership with the local certifying authorities, such as the College of Surgeons of Eastern, Central, and Southern Africa (COSECSA) (figure 3).

Sarah Woodrow MD, MEd, who is a member of the FIENS Board of Directors, says, "Over the last decade, political leaders around the world have come to recognize the importance of surgical and trauma care in global health. Organizations such as the G4 Alliance are imperative for two reasons. Firstly, they promote collaboration between different groups, often from entirely different regions of the world, towards a common goal. Secondly, they provide a unified, louder voice in front of key stakeholders, such as the WHO and our governments, as we advocate for support for the surgical care of patients worldwide. FIENS is proud to be an active member of the G4 Alliance. We look forward to continuing to work with the G4 members to bring more access and better, safer surgery to people everywhere."



FIGURE 3. FIENS Board of Directors member Dr. Sarah Woodrow (center right) with Dr. Yusef Mosley (center) teaching a hands-on spine course at the Black Lion Hospital, Addis Ababa, Ethiopia - 2019

Solidarity Bridge is an NGO that focuses on medical and surgical care in Bolivia and Paraguay. Since 2005, Richard Moser has led the neurosurgery program focused on education, service, resource mobilization, and research.

Their program aims to build workforce capacity and assure sustainable access to neurosurgical care for people living in these two nations. He states, "We recognize the importance of being engaged in the global movement for surgical care. Therefore Solidarity Bridge has taken a leadership role in the G4 Alliance Working Group on Latin America."

Dean of the Northwest School of Medicine (<http://nws.edu.pk/>) in Peshawar, Pakistan, Dr. Tariq Khan, recognizes the value to his institution of membership in G4 Alliance a means of connecting his faculty and students with like-minded advocates around the world. He notes, "Our team fully embraces the advocacy efforts of the G4 community. We hope to host the G4 Alliance Annual Meeting in Peshawar (Pakistan) in the next year or two."

The ThinkFirst Foundation (<https://www.thinkfirst.org/>) was funded jointly by the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS) in 1986, with a mission to "prevent brain, spinal cord, and other traumatic injuries through education, research, and advocacy." As such, ThinkFirst benefits from the global advocacy efforts sponsored by G4 Alliance member societies. ThinkFirst PC Representative Suzanne Tharin, MD, Ph.D., reports, "ThinkFirst's prevention resources, such as education modules, newsletters, press releases, and scientific publications, are useful to other PC members and ThinkFirst benefits from contact with global injury prevention advocates."

The Korle-Bu Neuroscience Foundation (KBNF, <https://kbnf.org/>) has supported workforce, service delivery, and infrastructure strengthening initiatives in Ghana, Liberia, Nigeria, and Sierra Leone. The foundation advocates locally and internationally for improved access to emergency and essential neurosurgical care. "KBNF, based in Vancouver, BC, Canada partners with altruistic medical champions in West African countries in the creation and expansion of neurosurgery. Originating in Ghana, expansion to Nigeria and Liberia has allowed establishing a collaborating multinational family. Missions emphasize expert neuro-specialist mentorship and education. Multiple shipments of basic neurosurgery equipment and supplies have aided the launch of 3 neurosurgery specialty units and enhanced neurosurgical operating rooms in 6 medical centers. As infrastructure is cultivated, education and training of critical care nurses, anesthesiologists, and biomedical engineers is a 2021 thrust." Marj Ratel, President of KBNF.

The Spina Bifida & Hydrocephalus Care Foundation promotes improved continuity for neural tube defects in Nigeria and advocates for multimodal measures to improve the quality of life in these patients. Their mission includes improving surveillance, research, public education, capacity building, service delivery, and policymaking for these patients and their families. "Our collaboration with the government and global neurosurgery partners has promoted universal access to neurosurgery care in Nigeria. We played an important role in the development of mandatory folic acid fortification, surveillance of congenital disabilities, and a zero-tolerance to stigmatization/abuse campaign," says Comrade Lawal-AiyedunOlubunmi, CEO and Founder Spina Bifida & Hydrocephalus Care Foundation. (sbhcarefoundation@gmail.com)

CURE International (www.cure.org) has provided care to 15,000 children with hydrocephalus and spina bifida. Also, the organization has trained 41 surgeons from 23 low- and middle-income countries through its CURE Neuro Fellowship Program in one of its hospitals in Uganda. (6) At this hospital, the founding Medical Director of CURE, Dr. Benjamin Warf, and the local team developed endoscopic third ventriculostomy with choroid plexus cauterization (ETV/CPC). CURE International joins other neurosurgical organizations within the G4 Alliance to globally advocate for folate fortification regulations and increased access to pediatric neurosurgical care. Joshua Korn, Director of Grants Acquisition and Management at CURE International, says, "CURE is a member of the G4 Alliance because it is critically important for us to be a part of the conversations happening around global surgery. The G4 Alliance is a great forum for learning about global surgery, connecting, and working together to raise awareness of the crucial role surgery plays in global health. It brings together a diverse set of members and fosters collaboration to help improve the quality of surgical services and access to surgical care globally" (Figure 4).



FIGURE 4. Pediatric neurosurgeons are operating at the CURE Children's Hospital of Uganda.

2. | CONCLUSIONS

Neurosurgery has been actively involved in the G4 Alliance from its beginning. Membership of neurosurgical organizations in the G4 Alliance provides a forum for working collaboratively with stakeholders to achieve progress in global surgery.

DISCLOSURES:

Drs. Dempsey and Rosseau are on the Board of Directors of the Foundation for International Education in Neurosurgery.

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