

The Journal of Global Neurosurgery (JGNS)

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1 | WHAT IS GLOBAL NEUROSURGERY?

The Global Neurosurgery Committee of the World Federation of Neurosurgical Societies defines Global Neurosurgery as “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” (1). The definition weaves the values of equity, social justice, and inclusivity through the fabric of the traditional characteristics that define modern neurosurgery, such as excellence, technical mastery, integrity, and compassion. The recent addition of the global health dimension and the accompanying scientific and systems approach to address the unmet neurosurgical needs in the world has galvanized our profession, stimulated academic inquiry, and inspired many who wish to enter it. One only needs to see the explosive number of publications using the terms “global neurosurgery” over the last few years as a proxy of academic interest (2) (figure 1).

2 | WHAT DOES RESEARCH IN GLOBAL NEUROSURGERY LOOK LIKE?

From a clinical perspective, any research that informs and improves patient care in settings where the neurosurgical services are limited in scope and volume would qualify. A great example is the resource stratified guidelines for TBI management (3). Also, studying the correlation between helmet use and severity of TBI and neurological outcomes using locally collected data is much more relevant and generalizable in the LMIC's than head injury studies from HIC's (4). Another area of research would be to explore how highly technical and expensive operations can be adapted to be helpful in resource-challenged settings while achieving similar (or perhaps even better) outcomes. For example, what would functional or vascular neurosurgery look like in an operating room within an LMIC? What are the minimal requirements for these procedures? How can these programs be initiated? Another area of study could be the use of big data and technology, such as augmented reality and machine learning, to improve decision-making, diagnostics, training, and patient care. We are only beginning to scratch the surface in this research field.

But Global Neurosurgery is much more than research into improving patient care. The global public health aspects of neurosurgery – including the delivery of timely, safe, and affordable neurosurgical care to ALL who need it – are largely unstudied. The gaps in understanding the Global Neurosurgery within the six domains of health systems, Service Delivery, Workforce, Infrastructure, Financing, Information Management, and Governance, are glaring. There was a total of 70 papers on the six health system domains and neurosurgical care (figure 2). When disaggregated by individual domains, Financing and Information Management were relatively understudied (3), and there were no papers on Governance (5). The research into the health system approach to neurosurgical care in LMIC's is grossly inadequate in scope and volume.

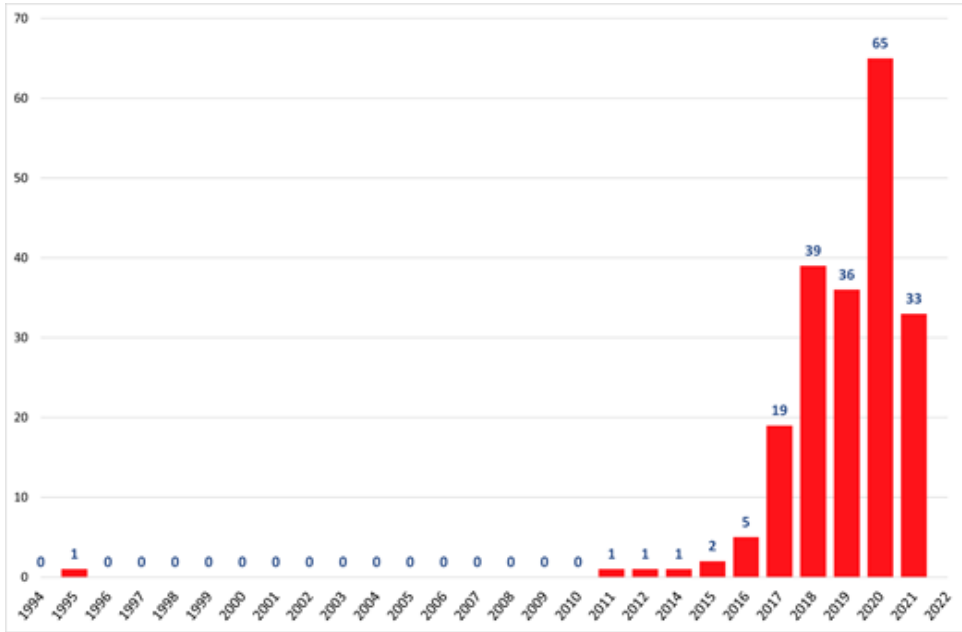


FIGURE 1 Secular Trends of Global Neurosurgery

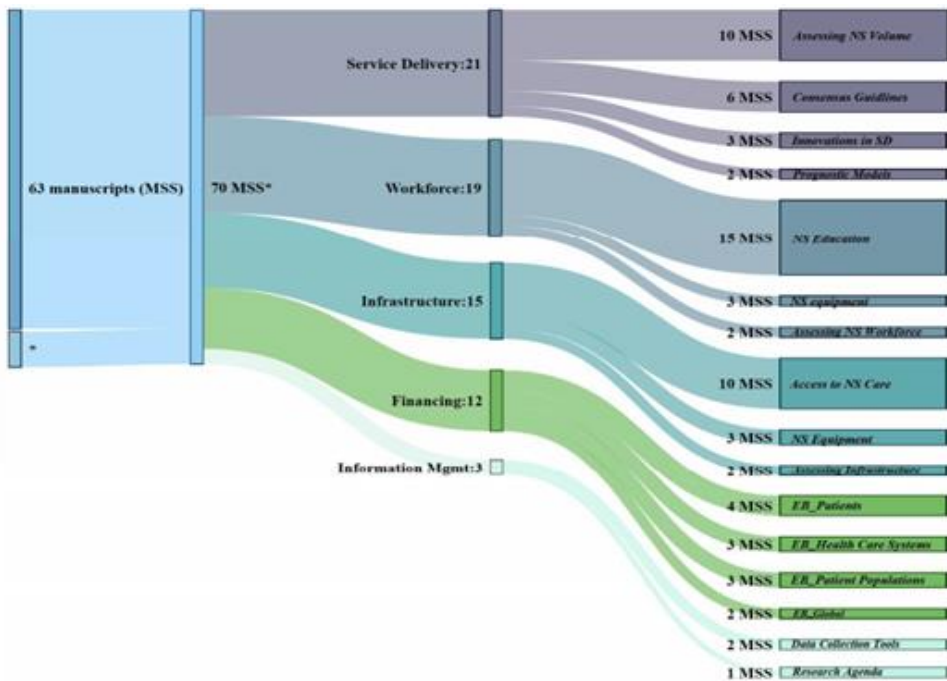


FIGURE 2 Sankey diagram showing GNS Research distribution by health system domains and sub-categories. The number of manuscripts (MSS) in each domain and sub-category are shown.

The Global Neurosurgery research gap cannot be solved by increasing research output alone. While the significant established journals that publish neurosurgery, research have been generous and incredibly accommodating in reviewing and publishing original articles, the costs associated with publishing, the unfamiliarity of research topic and methods, challenges in data collection, insufficient research infrastructure, lack of protected research time, and language remain structural barriers to achieving accurate research equity.

The new Journal of Global Neurosurgery was created to overcome some of these barriers. We have a vision of equitable access to research and research capacity for all neurosurgeons. We will do this by removing any financial barriers and actively supporting researchers from LMIC's. The articles will be freely accessible to anyone, thereby promoting disseminating ideas and knowledge about global neurosurgical inequities and how to address them. The journal aims to inform the path to universal access to neurosurgical care through quality scientific publishing.

In this inaugural issue of the Journal of Global Neurosurgery, we are grateful for the overwhelming support from the chief editors of the major neurosurgery journals. We invited neurosurgery leaders and champions worldwide to provide the Global Neurosurgery current status in their regions. We hope the journal will facilitate and promote further research to inform the path to universal access to timely, safe, and affordable neurosurgical care for all who need it, wherever they may live.

Sincerely,

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Editor-in-Chief

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