



Becoming a Neurosurgeon: A Perspective of the Ghanaian Female Neurosurgeon

Mabel Banson¹

¹Neurosurgery Unit, Department of Surgery, Korle-Bu Teaching Hospital, Korle-Bu. Accra, Ghana

Indian J Neurosurg 2022;11:188–191.

Address for correspondence Mabel Banson, BSc, MBChB, MGCS, FWACS, Neurosurgery Unit, Department of Surgery, Korle-Bu Teaching Hospital, P. O. Box KB 550, Korle-Bu. Accra, Ghana (e-mail: hsvati@gmail.com).

Abstract

Choosing a career path is not straightforward for most people, more so for the neurosurgeon. The decision-making process is influenced by knowledge of the options available, interest, and the pros and cons of the specific career path. Other factors that contribute are: previous education, family influence, exposure to mentors, and socioeconomic and cultural factors.

Keywords

- ▶ Ghana
- ▶ neurosurgeon
- ▶ perspective

This article is a perspective on becoming a neurosurgeon in Ghana, describing a path of determination, innovation, commitment, frustration, and the joy of making a difference—a career in Neurosurgery!

Introduction

“I want to be a Neurosurgeon” “Really?” “Are you serious? There are easier courses to apply to.” These are the typical responses I receive from friends and colleagues in the medical fraternity. Indeed, these fears are not unfounded, given the long hours out of home and difficulties associated with obtaining a decent family life. The inherent challenges in the Ghanaian health care system prepare you adequately for the journey. The path requires patience, practice, dedication, determination, perseverance, a strong will, and adequate exposure during training to gain experience and cultivate a life-long interest.

Neurosurgical Residency Training in Ghana

In 1901, Dr. Harvey Cushing laid the structural foundations for the neurosurgical residency program.¹ Over the decades, the training structure has evolved based on technology, regional standards, and resources.

The neurosurgeon’s journey begins with a standard 6-year medical school or a 4-year graduate-entry program with the award of a Bachelor’s degree in Medicine and Surgery

(MBChB). During the medical training, the neurosciences’ perceived abstract nature, short clinical rotations, and a diminished interest direct the selection of other disciplines over neurosurgery. The pathway to becoming a neurosurgeon is seen by many as a lonely and sacrificial journey. The few, especially females that show interest, are discouraged by their peers and family, citing the famous statement, “You have no life.”

The newly graduated doctors spend a 2-year supervised mandatory internship rotation in the major medical disciplines. Interns working outside the teaching hospital have little or no contact with the neurosurgical services.

After the internship, the doctor is submitted to a 2- to 3-year clinical service at a public facility before the residency program starts. The decision and choice of a program are subject to the hospital facility’s human resource needs.

The Korle Bu and Komfo Anokye Teaching Hospitals run the neurosurgery residency program under the Ghana College of Physicians and Surgeons (GCPS) and the West African College of Surgeons (WACS). The two-part neurosurgical program runs for a minimum of 7 years, with a mandatory 1-year out-of-training service for residents in the Ghana College Program.

DOI <https://doi.org/10.1055/s-0042-1750358>.
ISSN 2277-954X.

© 2022. Neurological Surgeons’ Society of India. All rights reserved. This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial-License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)
Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

The first part is a 3-year General Surgery training acquiring membership of the college upon completion of a membership exam, and the final 4 years focus on neurosurgery. Selection into neurosurgery residency follows an oral interview for the candidate who applied and met the college's criteria. The current resident intake is approximately one to two every 3 years. Residents are exposed to various elective and emergency neurosurgical conditions, including neurotrauma, neuro-oncology, pediatric, spine, and endoscopic neurosurgery, with limitations in neurovascular, minimally invasive, and endoscopic techniques. The resident also writes up a dissertation, a prerequisite for the fellowship examination. Upon completion of the requisite rotations, including and not limited to neuropathology and neuroradiology, the candidate applies for fellowship exams per the college's rules. The examinations include a dissertation defense, computer-based multiple-choice questions, orals, and long- and short-case examinations. Upon passing, a neurosurgeon is born.

Neurosurgery in Ghana

Neurosurgery is evolving in Africa. This is also true for Ghana. However, the proportion of neurosurgeons to neurosurgical disease is critically low.² The establishment of neurosurgery in Ghana is attributed to Dr. James F.O. Mustaffah,³ the first neurosurgeon in Ghana. After him came the immense contributions from Drs. Buenor Puplampu, Mutawakilu Iddrissu, Thomas Dakurah, George Wepeba, Jerome Boatey, Harry Akoto, Patrick Bankah, Adams Abass, Anthony Lamina, Col. G.A.O. Appiah, and Mawuli Ametefe to the current Ghanaian neurosurgical community of 22 neurosurgeons. It is an honor to have been mentored by these great neurosurgeons, becoming the first female neurosurgeon in Ghana and adding to approximately 243 African women in neurosurgery.⁴

Neurosurgical service is primarily public, with private care limited to outpatient services. The two primary teaching and tertiary hospitals, Korle-Bu Teaching Hospital (KBTH) and Komfo Anokye Teaching Hospital (KATH), contribute the most. KBTH serves the southern sector of the country and some nearby countries, and KATH serves the northern sector.

The neurosurgeons offer spine, neurotrauma, neuro-oncology, pediatric, and neuroendoscopic surgeries. Neurovascular and functional neurosurgery is rudimentary. The workload is high with long operating times and late-night stays in the hospital. Most people are unwilling to partake in this life-saving and rewarding venture with the added long training period. The terrain is seen as burdensome with constant problems—the availability and acquisition of logistics, materials, and equipment for work.

Challenges to being a Neurosurgeon in Ghana

Neurosurgery is a resource-intensive discipline. Health care managers sending out residents for training would rather have

them choose programs with quick returns on investment—shorter years of training and fit the service into existing health care infrastructure with minimum additional expenditure. Such practice makes it difficult for residents interested in a neurosurgical career to enroll in the program.

A career in neurosurgery demands hard work and sacrifice without commensurate financial rewards. There is a uniform salary structure in Ghana where professionals are paid based on their rank and not their specialty area. A neurosurgeon who works long hours and manages a huge caseload has the same compensation as another specialized clinician working for lesser hours and seeing a lighter caseload. This current practice is a significant disincentive to potential residents.

Limitations impact the current practice in neurosurgery units across the country—capital, equipment, primary human resource, and supporting staff. Thus, long waiting times for surgical care with relatively poor outcomes.

Additionally, certain sociocultural practices continue to have a significant negative impact on care. Diseases of the brain and spine are generally viewed through a religious/mystical lens. Patients and their caregivers may resort to alternative forms of health care and attempt to receive medical care as the last option. There is a cultural myth that patients who undergo spine surgery may never walk again, and patients who undergo cranial procedures may develop varying forms of schizophrenia. These cultural concerns further serve as a barrier to seeking neurosurgical care in the early stage of disease.

The Way Forward

Several reforms are being proposed to increase the number of specialists, including neurosurgeons. These reforms listed below will need intense advocacy to the policymakers.

To start with, removing the mandatory 2- to 3-year requirement as a medical officer before starting residency training in Ghana.

Also, the GCPS and WACS to introduce a straight neurosurgery program as is currently done by the Faculty of Orthopedics. This option will provide residents with a 6-year supervised neurosurgery training with an optional 1-year training in a subspecialty area of need and interest.

Local, regional, and global collaboration with neurosurgeons and neurosurgical centers would foster additional training for residents and continuous professional development for practicing neurosurgeons. In this regard, the Ghana Academy of Neurological Surgeons recently held an UpSurgeOn Training Course (► **Figs. 1 and 2**).

Conclusion

The journey, although grueling, was made easier by the immense sacrifices from family, forbears, and the current favorable environment engendered by colleagues and seniors, albeit in a limited-resource environment.

Neurosurgery in Ghana is still young. With committed investment in human resource development and



Fig. 1 Ghana Academy of Neurological Surgeons (GANS) UpSurgeOn Faculty Guiding Neurosurgery Residents on Craniotomy Approaches at the UpSurgeon Psychomotor Skills Training Course, Global Training Project 2021, 6th September 2021, University of Ghana Medical Centre, Legon, Accra, Ghana.



Fig. 2 GANS UpSurgeOn Faculty, Neurosurgery Residents and Organizers at the UpSurgeon Psychomotor Skills Training Course, Global Training Project 2021, 6th September 2021, University of Ghana Medical Centre, Legon, Accra, Ghana.

infrastructure, Ghana can make a huge global impact in neurosurgical care.

Conflict of Interest

None declared.

Acknowledgments

I express my sincere gratitude to Drs. Thomas Dakurah, Patrick Bankah, Mawuli Ametefe, Felix Siaw-Debrah, and Dickson Bando for reviewing this script.

References

- 1 Deora H, Garg K, Tripathi M, Mishra S, Chaurasia B. Residency perception survey among neurosurgery residents in lower-middle-income countries: grassroots evaluation of neurosurgery education. *Neurosurg Focus* 2020;48(03):E11
- 2 Dewan MC, Rattani A, Fieggen G, et al; We would like to thank the following individuals for their dedication and contribution to identifying the global neurosurgical deficit. Collaborators are listed in alphabetical order Executive Summary of the Global Neurosurgery Initiative at the Program in Global Surgery and Social Change. Global neurosurgery: the current capacity and deficit in the provision of essential neurosurgical care. *J Neurosurg* 2018; 1–10. Doi: 10.3171/2017.11.JNS171500
- 3 Adeloje A. Black African neurosurgeons practicing on the African continent. *J Natl Med Assoc* 1997;89(01):62–67
- 4 Karekezi C, Thango N, Aliu-Ibrahim SA, et al. History of African women in neurosurgery. *Neurosurg Focus* 2021;50(03):E15