

cambridge.org/cty

Dominique Vervoort¹  and Jacques Kpodonu²¹Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA and ²Division of Cardiac Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA

Letter to the Editor

Cite this article: Vervoort D and Kpodonu J (2020) Cardiac surgery in West Africa: the tipping point. *Cardiology in the Young* 30: 148. doi: [10.1017/S104795111900310X](https://doi.org/10.1017/S104795111900310X)

Received: 2 December 2019
Accepted: 4 December 2019
First published online: 8 January 2020

Keywords:

Cardiac surgery; global health; health policy

Author for correspondence:

D. Vervoort, Johns Hopkins Bloomberg School of Public Health, 615 North Wolfe Street, Baltimore, MD 21205, USA.
Tel: +1 857 415 9747;
E-mail: vervoortdominique@hotmail.com

Nwafor et al greatly illustrate the long and difficult road towards the establishment of an independent cardiac surgical centre in Nigeria.¹ Although the country has one of the longest histories of African countries in performing cardiac surgery from as early as 1974, there is no independently running cardiac centre to date. Nigeria's vast geography with nearly 200 million people is divided into six geopolitical zones, each with their individual models to establish a programme and adding to the heterogeneity across the country. The authors depict the models the zones have taken in the past two decades, emphasising the lack of sustainable benefit from visiting teams over the years.

Open-heart surgery has a long history in West Africa, starting in 1964 in Ghana, 1974 in Nigeria, in 1978 in Ivory Coast, and 1990 in Senegal.^{2,3} In Ghana, under the leadership of Professor Kwabena Frimpong-Boateng, the National Cardiothoracic Center at the Korle Bu Teaching Hospital was established in 1989, serving as the only cardiac centre for the country and only accredited cardiac surgery training programme under the West African College of Surgeons. Currently, the Komfo Anokye Teaching Hospital in Kumasi slowly builds towards its independent centre, supported by the expertise of the Harvard Medical School Teaching Hospitals. Meanwhile, Senegal and Ivory Coast serve as growing training hubs for cardiac surgery for francophone African countries. Today, however, West Africa relies on little over one cardiac surgeon per 10 million people.⁴ While Mauritania (two surgeons), Mali (one), Ivory Coast (one), and Benin (one) rely mostly on external support to complement local surgeons amidst a lack of centres, the rest of West Africa (Burkina Faso, Cape Verde, Gambia, Guinea, Guinea-Bissau, Liberia, Niger, Sierra Leone, and Togo) has yet to welcome their first cardiac surgeon, fully relying on visiting teams and neighbouring countries to alleviate their burden.⁴

Significant opportunities arise to move to and beyond the tipping point. As governments increasingly commit to National Surgical, Obstetric, and Anesthesia Plans – already developed in Senegal and Nigeria – inclusion of cardiac care is of paramount importance.⁵ Governments should acknowledge cardiac centres as more than just a trophy but as an integral proxy of a well-functioning health system. Moreover, as the authors mentioned, local teams and patients served by visiting cardiac teams should both benefit. If not, centres will remain reliant on exogenous support and never truly reach independent capacity, ensuring bilateral, communicative, and perhaps public–private collaborations moves away from traditional fly-in fly-out models and towards sustainable programmes. Lastly, the universal health coverage movement comes with an understanding of shifting from vertical disease silos (e.g., earmarked malaria funding) to horizontal systems-wide interventions (e.g., non-communicable disease care), for which cardiac surgery – truly cross-cutting – can be considered the epitome. Ensuring appropriate non-earmarked development aid and meeting countries' (and not funders') priorities will prove critical. The next two decades are expected to see a surge in health system strengthening in West Africa and other low- and middle-income countries: it is now up to the international community to decide whether they leave cardiac patients behind.

Acknowledgements. None.

Financial Support. This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

Conflicts of Interest. None.

References

1. Nwafor IA, Eze JC, Nwafor MN. Establishing a sustainable open heart surgery programme in Nigeria, a low-income country: which is the best model? *Cardiol Young* 2019; 1–5. [Epub ahead of print].
2. Edwin F, Tettey M, Aniteye E, et al. The development of cardiac surgery in West Africa—the case of Ghana. *Pan Afr Med J* 2011; 9: 15.
3. Yangni-Angate KH, Meneas C, Diby F, Diomande M, Adoubi A, Tanauh Y. Cardiac surgery in Africa: a thirty-five year experience on open heart surgery in Cote d'Ivoire. *Cardiovasc Diagn Ther* 2016; 6: S44–S63.
4. Vervoort D, Meuris B, Meyns B, Verbrugghe P. Global cardiac surgery: access to cardiac surgical care around the world. *J Thorac Cardiovasc Surg* 2019; published online May 1. DOI:[10.1016/j.jtcvs.2019.04.039](https://doi.org/10.1016/j.jtcvs.2019.04.039).
5. Albutt K, Sonderman K, Citron I, et al. Healthcare leaders develop strategies for expanding national surgical, obstetric, and anaesthesia plans in WHO AFRO and EMRO regions. *World J Surg* 2019; 43: 360–367.

© Cambridge University Press 2020.

CAMBRIDGE
UNIVERSITY PRESS