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Women in Thoracic Surgery in Africa: a call for intersocietal coalition

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Societies like Women in Thoracic Surgery (WTS), founded in 1986 and 'Women in General Thoracic Surgery', the committee recently formed within the European Society of Thoracic Surgeons (ESTS), work to enhance the mentorship and education of women thoracic surgeons across North America and Europe [1, 2]. Recent evidence confirms the successful role of WTS activities to promote education through providing scholarships and to otherwise further the advancement of female cardiothoracic residents [3]. The encouraging achievements of these initiatives have been based upon and driven by the experience in high-income countries. The purpose of this editorial is to place these efforts within a larger global perspective.

The global and ever-increasing burden of cancer and cardiac diseases in low-income countries have been demonstrated [4, 5]. The major international organizations have documented health disparities and lack of access to clinical trials as socioeconomic constructs [6] and are calling for action in an effort to increase participation and membership, and promote educational development of clinicians from low-income countries as the next step towards equity in the Global Surgery spectrum. These initiatives, however, neither reach nor target the female surgical workforce, as demonstrated by the limited representation of women in cardiothoracic specialities, particularly in sub-Saharan Africa [7].

In South Africa during the last decades, the number of enrolled medical students increased by 34%, with a major demographic shift due to more female students and African blacks [8], but this shift has not translated into an increased number of cardiothoracic surgeons being trained locally. There have been several initiatives providing fellowships and international training opportunities [9, 10], especially within the cardiac subspecialty. However, thoracic surgeons must be properly trained to manage a broad and expanding range of health disorders, often with very limited resources. Preparation for board certification would lead to appropriate recognition and management by their national and local health authorities, especially when working within

public- and government-funded teaching hospitals. These developments require investment not only in the necessary infrastructure but also in the human resource of paramedical personnel. In other words, when establishing collaborative projects within low-income countries, it is crucial that all stakeholders, including the medical industry, work together to enable the national colleges to implement an equalitarian programme to train future cardiothoracic surgeons.

Looking specifically at the Thoracic Surgery workforce, it is difficult to find female role models for African colleagues as reported by Dr Vosloo in her recent paper [7] with only 6 female registered cardiothoracic surgeons still working in Africa. Gender bias and gender discrimination are cited as the culprits explaining this low figure.

Women in Surgery Africa is a membership organization providing mentorship to female surgeons, residents, and medical students [11]. The organization is a recognized subgroup of the College of Surgeons of East, Central, and Southern Africa and was established in 2015 to support the College in increasing the number of female surgical trainees. Based on Women in Surgery Africa initiatives, several reports have been published which clearly demonstrate African women's significant barriers to pursuing a surgical career in general, let alone specialty training: only 3% of the specialist surgeon workforce in East, Central and Southern Africa is represented by cardiothoracic doctors and only 9% of the entire surgical workforce is female [12–14].

During the last ESTS Annual Meeting, the critical representation of female thoracic surgeons in Africa was discussed in a dedicated session on health disparities and inequalities, focusing on the humanitarian work of Prof Toni Lerut in managing paediatric oesophageal strictures caused by caustic ingestions in West Africa. As highlighted in his report, such accidental ingestion is mostly related to poor living conditions and lack of awareness due to the lack of education and illiteracy of the mothers in the majority of the cases. Furthermore, we must consider that the

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educational issue for the female population in Africa starts early: many adolescent girls become pregnant because they lack the knowledge needed to make informed decisions about their sexuality, family planning and their reproductive health. Hence, role models like Dr Lindiwe Sidali represent the crucial enlightening to inspire the future generation of educated professional African women [15]. During her childhood, she was a cattle herder supporting her family while her father was working in the coal mines. But the family managed to offer her the possibility of higher education and in 2018 she became the South Africa's first African female cardiothoracic surgeon in the country and realized the importance of being a role model for her colleagues.

Creating rightful partnerships with local collaborators in General Thoracic Surgery and establishing multi-institutional research projects are fundamental aspects to implement, as has been recently highlighted by investigating the importance of the equitable relationship between African countries and high-income ones within these collaborations [16–18]. These projects should focus specifically on issues pertaining to challenges women are facing in the medical profession and collectively identify ways of addressing them, such as targeting support to young girls and developing leadership within the community of women working in the healthcare sector. These specific efforts have been already identified by associations in non-surgical specialities (e.g. Medical Women's Association of Nigeria and South Africa [19]) but would benefit from support and example available through established Women's Surgical Associations.

In cardiac surgery, leaders of renowned Cardiac Societies established an international working group representing a partnership among societies, industry, and government, to evaluate and endorse the development of cardiac care in low- to middle-income countries [20]. Projects similar to this are the next step to endorse and support the female workforce in Africa, allowing students who dream to change the face of medicine to become aware of what has been done in other parts of the globe and setting an example for them to follow and exceed in their countries.

To put it in the words of Lidiwe Sidali as she said in an interview: '... We need opportunities and exposure. But the most important thing that is needed to change the future for all African children is the eradication of poverty. And one of the ways to do that is through education. That is how you truly liberate a person. But education needs money, which is why education should be free for those who comes from disadvantaged backgrounds. We also need more positive role models for young women. African girls need to see a girl that looks like them making it in the world and in that way they can see that it can be done'.

The purpose of this editorial is to call upon action from the Thoracic Surgery leadership and community to engage on setting up the tools for reaching out to the thoracic community in low-income countries.

Special attention to females in this effort will be ensured by WTS, women in thoracic surgery committees within ESTS and other important societies like the American Association for Thoracic Surgery, which has recently announced an American Association for Thoracic Surgery Foundation Valerie Rusch Mentored Career Development Award providing support for women cardiothoracic surgeons and the development of cardiothoracic expertise specifically in low- to middle-income countries.

Future collaborative projects should include considerations beyond providing training fellowships and infrastructure

improvement; implementing educational initiatives and programmes that sponsor-free education in general and specifically for girls and women is a key element necessary to address poverty and health disparity in these parts of the world.

REFERENCES

- [1] Pompili C, Veronesi G, Novoa NM, Gomez-Hernandez MT, Sharkey AJ, Bhatti F *et al.* Women in Thoracic Surgery: European perspectives. *J Thorac Dis* 2021;13:439–47.
- [2] Ceppa DP, Antonoff MB, Tong BC, Timsina L, Ikonomidis JS, Worrell SG *et al.* 2020 Women in Thoracic Surgery update on the status of women in cardiothoracic surgery. *Ann Thorac Surg* 2021.
- [3] Williams KM, Hironaka CE, Wang H, Bajaj SS, O'Donnell CT, Sanchez M *et al.* Women in Thoracic Surgery scholarship: impact on career path and interest in cardiothoracic surgery. *Ann Thorac Surg* 2021;112:302–7.
- [4] Bowry AD, Lewey J, Dugani SB, Choudhry NK. The burden of cardiovascular disease in low- and middle-income countries: epidemiology and management. *Can J Cardiol* 2015;31:1151–9.
- [5] Shah SC, Kayamba V, Peek RM Jr, Heimburger D. Cancer control in low- and middle-income countries: is it time to consider screening? *J Glob Oncol* 2019;5:1–8.
- [6] Rodin D, Grover S, Xu MJ, Hanna TP, Olson R, Schreiner LJ *et al.*; International Association for the Study of Lung Cancer Advanced Radiation Technology Committee. Radiotherapeutic management of non-small cell lung cancer in the minimal resource setting. *J Thorac Oncol* 2016;11:21–9.
- [7] Vosloo SM. Realities and challenges for female cardiothoracic surgeons: an African perspective. *J Thorac Dis* 2021;13:448–55.
- [8] Sliwa K, Zühlke L, Kleinloog R, Doubell A, Ebrahim I, Essop M *et al.* Cardiology-cardiothoracic subspecialty training in South Africa: a position paper of the South Africa Heart Association. *Cardiovasc J Afr* 2016; 27:188–93.
- [9] Nwafor IA, Eze JC, Nwafor MN; National Cardiothoracic Center of Excellence (NCTCE), University of Nigeria Teaching Hospital (UNTH), Ituku-Ozalla, Enugu, Nigeria. Establishing a sustainable open heart surgery programme in Nigeria, a low-income country: which is the best model? *Cardiol Young* 2019;29:1489–93.
- [10] Ramirez AG, Nuradin N, Byiringiro F, Ssebuufu R, Stukenborg GJ, Ntakiyiruta G *et al.* Creation, implementation, and assessment of a general thoracic surgery simulation course in Rwanda. *Ann Thorac Surg* 2018;105:1842–9.
- [11] Odera A, Tierney S, Mangaoang D, Mugwe R, Sanfey H. Women in surgery Africa and research. *Lancet* 2019;393:2120.
- [12] Commander SJ, Ellis D, Williamson H, Grabski D, Sallah AY, Derbew M *et al.* Predictors of burnout and depression in surgeons practicing in east, central, and southern Africa. *J Surg Res* 2020;255:536–48.
- [13] Nadler EP, Nwomeh BC, Frederick WA, Hassoun HT, Kingham TP, Krishnaswami S *et al.*; Global Affairs Committee of the Association for Academic Surgery. Academic needs in developing countries: a survey of the West African College of Surgeons. *J Surg Res* 2010;160:14–7.
- [14] O'Flynn E, Andrew J, Hutch A, Kelly C, Jani P, Kakande I *et al.* The specialist surgeon workforce in east, central and southern Africa: a situation analysis. *World J Surg* 2016;40:2620–7.
- [15] Sidali DL. Opening doors for African girl children: the story of Dr Lindiwe Sidali, South Africa's first Female African Cardiothoracic surgeon. In: Unit KDoHsCC, 2018.
- [16] Chu KM, Jayaraman S, Kyamanywa P, Ntakiyiruta G. Building research capacity in Africa: equity and global health collaborations. *PLoS Med* 2014;11:e1001612.
- [17] Faure MC, Munung NS, Ntusi NAB, Pratt B, de Vries J. Mapping experiences and perspectives of equity in international health collaborations: a scoping review. *Int J Equity Health* 2021;20:28.
- [18] Sliwa K, Mbakwem A, Carrilho C, Zühlke L, Tibazarwa K, Mocumbi A. Moving ahead: building a strong network among female cardiovascular clinician scientists and researchers in Africa. *JACC Case Rep* 2019;1:40–3.
- [19] Medical Women's Association of Nigeria. <https://mwan.org.ng>.
- [20] Zilla P, Bolman RM, Yacoub MH, Beyersdorf F, Sliwa K, Zühlke L *et al.* The Cape Town declaration on access to cardiac surgery in the developing world. *Ann Thorac Surg* 2018;106:930–3.