Report

The Cape Town Declaration on Access to Cardiac Surgery in the Developing World

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Mission: to urge all relevant entities within the international cardiac surgery, industry and government sectors to commit to develop and implement an effective strategy to address the scourge of rheumatic heart disease in the developing world through increased access to life-saving cardiac surgery.

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Twelve years after cardiologists and cardiac surgeons from all over the world issued the Drakensberg Declaration on the Control of Rheumatic Fever and Rheumatic Heart Disease in Africa, calling on the world community to address the prevention and treatment of rheumatic heart disease (RHD) through improving living conditions, to develop pilot programmes at selected sites for control of rheumatic fever and rheumatic heart disease, and to periodically review progress made and challenges that remain,[1] RHD still accounts for a major proportion of cardiovascular diseases in children and young adults in low- and middle-income countries, where more than 80% of the world's population live. Globally equal in prevalence to human immunodeficiency virus infection, RHD affects 33 million people worldwide.[2]

Prevention efforts have been important but have failed to eradicate the disease. At the present time, the only effective treatment for symptomatic RHD is open-heart surgery, yet that life-saving cardiac surgery is woefully absent in many endemic regions. In this declaration, we propose a framework structure to create a co-ordinated and transparent international alliance to address this inequality.

Elimination of RHD and relief from its debilitating consequences can only occur through interdisciplinary effort, as outlined in the Cairo Accord.[3] Previous initiatives have focused on primary and secondary prevention of RHD.[4] Their declarations have been recognised by the heads of state of African Union countries and by the World Health Organisation. This recognition has been important in developing recommendations by the World Health Organisation executive board to the 2018 World Health Assembly to enlist global commitment to RHD.

Progress in the prevention of RHD has been slow during the past 15 years,[5] and therefore surgery will likely remain an integral part of RHD treatment for several generations. Lack of access to cardiac surgery services and the cost of valve replacement render this disease fatal for millions of patients. In endemic regions of low-income countries, the need for cardiac surgery is estimated at 300 operations per one million population (Global Unmet Needs in Cardiac Surgery, unpublished work by Zilla and colleagues), yet, the nearly one billion people living in sub-Saharan Africa between the Maghreb and South Africa have access to only 22 cardiac centres.[6]

Although there is one cardiac centre per 120 000 people in the United States, there is only one centre per 33 million in Africa. Furthermore, RHD is not restricted to sub-Saharan Africa. India, Pakistan, China and Indonesia together account for 72% of the mortality rate of RHD cases worldwide.[2]

We strongly endorse the position that building local capacity is the best solution for this serious public health problem. Many lives have been saved by humanitarian 'fly-in' missions, but these efforts are neither sustainable nor cost effective. The non-governmental organisations associated with these programmes are shifting focus towards building long-term partnerships with host countries to develop autonomous local services with government buy-in.[7] A massive investment in new cardiac centres in these regions is unrealistic; globally, an additional few thousand cardiac centres would be required to address the unmet needs (Global Unmet Needs in Cardiac Surgery, unpublished work by Zilla and colleagues).

It is not sufficient for governments and non-governmental organisations to support the training of cardiologists and cardiac surgeons from these regions at high-income country facilities, because they will not be trained in most of the pathologies awaiting them in their own countries and will be unfamiliar with resource-constrained circumstances.

There is an urgent need for a concerted effort by all stakeholders to address the plight of the poor in these regions, who need cardiac surgery. As signatories and endorsing organisations of the Cape Town Declaration, we propose a comprehensive solution with two principal aims.

Aim 1: To establish an international working group (coalition) of individuals from cardiac surgery societies and representatives from industry, cardiology and government to evaluate and endorse the development of cardiac care in low- to middle-income countries.

It is proposed that the international coalition will have two representatives from each of the major cardiac surgery societies (the Society of Thoracic Surgeons, American Association for Thoracic Surgery, European Association for Cardio-Thoracic Surgery, the Asian Society for Cardiovascular and Thoracic Surgery), and ideally, two additional committed members. There will be at least one representative from industry and at least one appointee to represent cardiology/the World Heart Federation. The responsibilities of the coalition will include establishing criteria for centres for clinical care and training as well as selecting and endorsing the centres. The coalition will derive metrics of quality and performance for the endorsed centres of training and clinical care and will encourage standardisation of care to the extent possible.

The coalition will advocate mutually agreed policies and prescriptions to relevant governmental bodies. In addition, the coalition will engage with industry and private sources of philanthropy for financial assistance with large-scale initiatives.

Aim 2: To advocate for the training of cardiac surgeons and other key specialised caregivers at identified and endorsed centres in low- to middle-income countries.

The case has been made above for critical providers obtaining training in settings and conditions and dealing with the cardiac pathologies that they will be encountering in their practice in their countries of origin.

It is preferred that centres endorsed by this coalition be based on an alliance of four stakeholders: a programme initiator (e.g. a government, a university, or a non-governmental organisation), an audited training centre in a low- to middle-income country, a committed partner institution in a high-income country, and a consortium of industry that would sign on as benefactors to the specific programme. Because regional centres in low- to middle-income countries typically operate within a resource-scarce environment, resulting in lower case numbers than needed for the training of outside residents, a facilitated capacity increase to help achieve higher case numbers would benefit all participants.

Summary: It is imperative that action be taken urgently. A nucleus of one to three centres should be identified and endorsed, with co-ordination by global stakeholders, as quickly as possible. The implementation of this initiative will only be made possible by the endorsement of all the relevant cardiothoracic societies and agencies subscribing to clearly defined targets and timelines, and committing appropriate resources. The time to act is now.

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