

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

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**The 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.**

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 programs 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 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 coordinated 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 recognized by the Heads of State of African Union

countries and by the World Health Organization. This recognition has been important in developing recommendations by the World Health Organization Executive Board to the 2018 World Health Assembly to enlist global commitment to RHD.

Progress in prevention of RHD has been slow during the past 15 years [5], and thus, 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 1 million population (“Global Unmet Needs in Cardiac Surgery,”

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unpublished work by Zilla and colleagues), yet, the nearly 1 billion people living in Sub-Saharan Africa between the Maghreb and South Africa have access to only 22 cardiac centers [6]. Although there is 1 cardiac center per 120,000 people in the United States, there is only 1 center per 33 million in Africa. Furthermore, RHD is not restricted to Sub-Saharan Africa. India, Pakistan, China, and Indonesia together account for 72% of mortality 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 nongovernment organizations associated with these programs are shifting focus toward building long-term partnerships with host countries to develop autonomous local services with government buy-in [7]. A massive investment in new cardiac centers in these regions is unrealistic; globally, an additional few thousand cardiac centers 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 nongovernment organizations 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 organizations 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 2 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, 2 additional committed members. There will be at least 1 representative from industry and at least 1 appointee to represent cardiology/the World Heart Federation. The responsibilities of the Coalition will include establishing criteria for centers for clinical care and training as well as selecting and endorsing the centers. The Coalition will derive metrics of quality and performance for the endorsed centers of training

and clinical care and will encourage standardization 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 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 specialized caregivers at identified and endorsed centers 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 centers endorsed by this Coalition be based on an alliance of four stakeholders: a program initiator (eg, a government, a university, or a nongovernment organization), an audited training center 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 program. Because regional centers 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 1 to 3 centers should be identified and endorsed, with coordination 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.**

## Signatories

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- Dan Ncayiyana (Past Editor in Chief, *South African Medical Journal*, South Africa)
- David Williams (Past Editor in Chief, *Biomaterials*, USA)
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