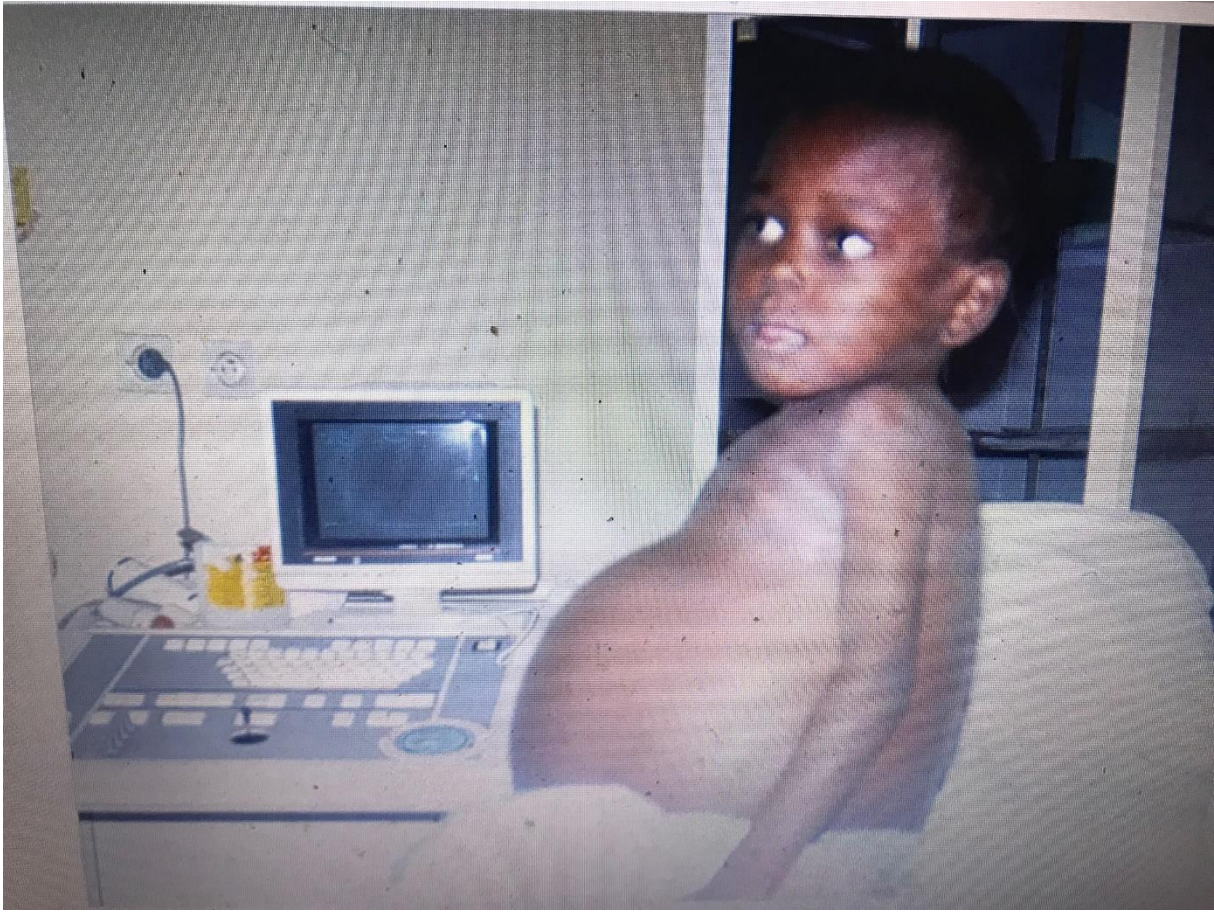


**ABIDJAN DECLARATION FOR OPEN-HEART SURGERY DEVELOPMENT AND FINANCING IN SUB-SAHARAN AFRICA**



**“In SUB-SAHARAN AFRICA, hundreds of thousand children with Heart Diseases, cannot access Open-Heart Surgery and consequently their physical conditions will worsen steadily up to untimely death”.**

1. The first International Conference of the Ivoirian Society of Thoracic and Cardiovascular Surgeons (SICTCV) was organized from May 8 to 10, 2019, in Abidjan, with a group of team lead surgeons from West and Central Africa. The topic of this first International Conference was: “Thoracic and Cardiovascular Surgery in Côte d’Ivoire from 1977 to 2018: Progress and Outlook”. The fundamental aim of this conference was to share the forty-year-experience of Côte d’Ivoire with African surgeons, leaders of surgical teams, to look for means for improving Thoracic and Open-Heart Surgery practices; and build a South-to-South cooperation among African Thoracic

and Cardiovascular Surgeons. A roundtable was organized on Friday, May 10<sup>th</sup>, 2019 on the theme: “Open-Heart Surgery in Sub-Saharan Africa: current situation and difficulties in our respective countries, solutions, and recommendations”. The first objective of this roundtable focused on access to Open-Heart Surgery delivery in Sub-Saharan Africa, and recommendations to governments and health policy-makers to ensure the development and sustainability of this Open-Heart Surgery in Sub-Saharan Africa.



**Participants: Surgeons, Cardiologists, Biologists, Intensivists and Administrators**



2. Thus, successively, **The Associate Professor Khaled Ould Boye, Mauritania, Cardiovascular Surgeon, Vice-president of the Mauritanian Society of Cardiology, Head of the department of Cardiovascular Surgery at the *National Center of Cardiology***



made a presentation on the past, and the present of Heart Surgery, the good results achieved after Surgery for the first Mauritanian patients between 2012 and 2019.

He mentioned the difficulties encountered:

- Tough access of patients to Open-Heart Surgery for lack of universal health care insurance;
- High cost of Open-Heart Surgery; which makes that care unaffordable to an important group of patients;
- Constraints due to supply of essential consumables.

**Professor Mouhamadou Ndiaye from Senegal, Thoracic and Cardiovascular Surgeon, the promoter of Thoracic and Cardiovascular Surgery in Senegal, head of the department for Thoracic and Cardiovascular Surgery in Senegal, Head of the Thoracic and Cardiovascular Unit at FAAN hospital, Dakar,**



pointed out the following difficulties:

- lack of qualified staff, and infrastructures;

- purchase of consumables and the excessive cost of this surgery in Dakar;

Nevertheless, Professor Ndiaye said that there are achievements in his country in terms of infrastructures, including: an adult Cardiac Surgery unit, a Cardio-pediatric center and a research and training unit with a breeding farm.

He focused on the importance of financial support from our governments to ensure the sustainability of this practice. He also mentioned that they receive subsidies from the Senegalese government.

As for solutions, he suggested the following for Open-Heart Surgery:

- Possibility to make or acquire kits for Open-Heart Surgery;
- Organization of collective procurement markets for consumables for Open-Heart Surgery by annual identification of country's needs in the south of the Sahara;
- Necessity to set flat rates for Open-Heart Surgery.

**Dr. Reddy Atipo-Galloye Reddy from Congo-Brazzaville, Cardiovascular Surgeon, head of the department of Cardiovascular Surgery at the University**



**Hospital of Brazzaville** underlined challenges related to:

-Training of qualified staff; such as Surgeons, Perfusionists, Instrumentalists; Anesthetists - Intensivists, Physiotherapists and Inhalotherapists;

- Difficulties to get consumables;

Then, he recommended the creation of «African Union of Open-Heart Surgery” and South-South cooperation.

For him, implementation of these recommendations would allow them to satisfy the entire current needs for Open-Heart Surgery in Congo-Brazzaville, and he added that six hundred patients are on the waiting list.

**Professor Mohamed LY, Pediatric Heart Surgeon, Franco-Mauritanian, President and Founder of the French Association of Heart for West Africa**



insisted on the great necessity to set up centers of excellence for a better sharing of human and financial resources for a more efficient and rapid development of Heart Surgery in Sub-Saharan Africa.



**Dr. Adama Sawadogo from Burkina Faso, Cardiovascular Surgeon ; came on behalf of Professor Gilbert Bonkougou, Head of the department of Thoracic and Cardiovascular Surgery at the University Hospital of Tingandogo, Ouagadougou.**



According to him, the government has made efforts for Open-Heart Surgery, and that has led to the first successful Open-Heart Surgery in Ouagadougou two weeks ago. He informed the audience of the building of a new hospital that will shelter a department of Open-Heart Surgery. Beside the importance to train qualified staff, he also insisted on the financial support for Open-Heart Surgery and the necessity for inter-African cooperation, and a political support to the development of this medical field in Sub-Saharan Africa.

**Professor Remi Seka, Chief Executive Officer of the Heart Institute of Abidjan,**



insisted on setting up a global order for purchasing centers, taking into account the consumables needs of all Open-Heart Surgery departments that are willing to do so; which would reduce the cost of Heart Surgery consumables in Sub-Saharan Africa.

**Dr. Wilfried Gandji, Thoracic and Cardiovascular Surgeon from Benin, Head of the department of Thoracic and Cardiovascular Surgery, University Hospital of Cotonou,**





also focused on the necessity to guarantee access and sustainability to Open-Heart Surgery through three major priorities:

- Training qualified staff,
- Building appropriate infrastructures,
- Financing.

As his predecessors, he amplified the call for African Intelligentsia on Thoracic and Cardiovascular Surgery to advocate for African solidarity around the development of Open-Heart Surgery in Sub-Saharan Africa.

Finally, **Professor Koffi Hervé Yangni-Angate, Thoracic and Cardiovascular Surgeon, President of the Ivorian Society of Thoracic and Cardiovascular**

**Surgeons, Head of the Department of Cardiovascular and Thoracic Diseases,**



**University Hospital of Bouake, Cote d'Ivoire,** highlighted the similarity of difficulties encountered in Open-Heart Surgery practice in Sub-Saharan Africa; and the urgency to make recommendations to policy-makers of all Sub-Saharan African countries.

3. Before recommendations, all participants pointed out these situations :

- Cardiovascular diseases (CVD) are the first cause of death in the world: each year, many people die from cardiovascular diseases than other causes.
  - An estimated 17.7 million people die from cardiovascular diseases, accounting for 31% of total global mortality.
  - More than three deaths out of 4 caused by cardiovascular diseases happen in countries with low or intermediary income including Sub-Saharan Africa.
  - The highest prevalence of rheumatic Heart Disease in the world is found in sub-Saharan Africa in children aged 5 to 14 years at 5.7 per 1000; there are 2 million children with rheumatic Heart Disease worldwide, including 1 million in Sub-Saharan Africa.
- There are 200,000 to 470,000 new cases of rheumatic Heart Disease every year. In children with Heart diseases in Sub-Saharan Africa, rheumatic heart disease is the leading cause of death during the first 10 years of life with a mortality rate of 12.5% to 20%; among the deceased, many could have been saved if there were easy access to Open-Heart Surgery; among the survivors, hundreds of thousands cannot access Open-Heart Surgery and will see their physical condition deteriorate until early death.
- More than 1.5 million Open-Heart Surgeries are performed every year in the world by more than 6,000 Surgeons; whereas in Sub-Saharan Africa, few patients have access to Open-Heart Surgery.
- There are 1,222 Open-Heart Surgeries performed for 1 million of inhabitants in North America, opposite to 18 for 1 million of inhabitants in Africa. In other words, there is 1 center for 120,000 people in the US, opposite to only 1 single center for 33 million of people in Africa; that is really insufficient.



- Nowadays, Centers for Heart Surgery are rare in Sub-Saharan Africa with 3,000 to 5,000 new cases per year and by country in need for Open-Heart Surgery.

- The most affected countries by Cardiovascular diseases are the poor with low or intermediary income. The inhabitants of these countries do not benefit from integrated program of primary care for early detection, and health cares for people at risk comparatively to high income countries.

- Cardiovascular diseases and other non-transmitted diseases contribute to household poverty due to catastrophic health cost and high level of direct payments faced by households.

- At the macroeconomic level, CVDs have a negative impact on economies of low- and middle-income countries. "They would reduce the gross domestic product (GDP) of these countries, which are experiencing rapid economic growth of 1 to 5% because many people die prematurely," says WHO in a checklist on Cardiovascular Disease dated September 2011.

- total economic loss due to CVD in low- and middle- income countries such as those in Sub-Saharan Africa was estimated at US\$3.7 trillion between 2011 and 2015, representing approximately half of the economic burden of non-transmissible diseases and 2% of GDP in low- and middle-income countries.

- national or regional economic loss due to CVD in Sub-Saharan Africa is estimated at US\$9 trillion.

4. After the aforementioned facts, the following recommendations were made:

## **RECOMMENDATIONS TO GOVERNMENTS**

### **A. REGARDING HUMAN RESOURCES**

- Encouraging the recruitment of at least 2 surgeons, 4 anesthesiologists, 4 intensivists, 2 anesthesiologists, 2 perfusionists, 1 physiotherapist, 1 respiratory therapist per Open-Heart Surgery.

### **B. REGARDING CONSUMABLES, DRUGS AND MEDICAL EQUIPMENT**

- Authorizing granting of "Kits" for Open-Heart Surgery;
- Enabling the supply of consumables and drugs by purchasing groups or specialized industries;
- Encouraging group purchases of all consumables and drugs expressed by Open-Heart Surgery centers in sub-Saharan Africa;
- Granting tax relief on all consumables, drugs, medical imaging equipment and biomedical equipment in countries where it does not exist.

### **C. REGARDING INFRASTRUCTURES**

- Building at least 1 Open-Heart Surgery center per country in African Sub-Saharan which should include;
- An outpatient unit;
- A Cardiology Unit with at least 30 beds;
- A medical and surgical intensive care unit (ICU) of at least 10 beds;
- A 15-bed surgical hospital unit;
- A medical imaging unit with a complete cardiac hemodynamics room, and two echocardiography-doppler rooms;
- A Biology Unit and a Pharmacy Unit;
- At least two operating rooms and two artificial "Heart-Lung" machines in surgical Unit.

#### D. REGARDING FINANCING

- Ensuring universal health coverage for all patients applying for Open-Heart Surgery, with priority given to children aged 0 to 15 years;
- Benefiting from 2% fund from companies and industries established in our countries;
- Allocating 0.1% of the national budget to enhance the development, and permanent practice of Open-Heart Surgery in each Country;
- Facilitating at least 200 Open-Heart Surgery cases per Center and Country;
- Developing bills of law and decrees to regulate Open-Heart Surgery practices and ensuring its autonomous financial management.

#### **WE, THORACIC AND CARDIOVASCULAR SURGEONS, HAVE COME TOGETHER AND DECIDE TO:**

- Share our skills and expertise;
- Setting up an Advanced Specialized Studies Degree for physicians interested in Thoracic and Cardiovascular Surgery and a Master's degree for Cardiopulmonary Bypass Circulation;
- Setting up a breeding farm and unit for simulation and learning in the surgical process per Center and Country ;
- Setting up a unit for Research in "Cardiovascular Health" per Center and Country ;
- Developing and strengthening South-to-South Cooperation through the African Association of Thoracic and Cardiovascular Surgeons ;
- Setting up a Society for Thoracic and Cardiovascular Surgery in every country ;
- Holding regular annual meetings for experience and research sharing;
- Setting up a common database register for our surgical patients ;



- Setting up a Monitoring Committee for the development of Open-Heart Surgery in our countries.

**WE, THORACIC AND CARDIOVASCULAR SURGEONS, ENCOURAGE :**

- African Development Banks, pharmaceutical and biomedical industries, or medical imaging equipment, Donors, local or international Foundations, Humanitarian Organizations to enhance Open-Heart Surgery development in sub-Saharan Africa ;
- More fund-raising campaigns to support Open-Heart Surgery and research;
- Setting up Centers of excellence for Open-Heart Surgery in accordance with international standards.

**WE, THORACIC SURGEONS, ASSERT HEREBY THAT THROUGH THE OPEN-HEART SURGERY PERFORMANCE ENHANCEMENT, WE WILL HAVE AN IMPORTANT SOCIAL IMPACT THROUGH OUR CONTRIBUTION TOWARD:**

- Achieving the third Goal of 2063 diary of the African Union Committee and Sustainable Development Goals of the United Nations through our involvement in:
  - a. Decrease by of at least 25% of the perinatal and infant mortality before 5 years.
  - b. Improvement of rural and city populations access to Open-Heart Surgery by at least 30%

**WE, HEART AND THORACIC SURGEONS, INSIST ON THE CONTRIBUTION OF OPEN-HEART SURGERY IN SUB-SAHARAN AFRICA TO :**

- Decrease at least by one-quarter the heavy financial burden of several medical evacuations for Open-Heart Surgery which roughly cost 20,000 to 40,000 Euros;
- Reduce by at least 75% of the medical evacuations abroad for Open-Heart Surgery in order to support the cash stress experienced by our sub-Saharan African States.

Have signed, the following Thoracic and Cardiovascular Surgeons and cardiologists:



**Panelists: Invited African Thoracic and Cardio-Vascular Surgeons**

- Professor Koffi Herve Yangni-Angate (Côte d'Ivoire)
- Professor Mouhamadou Ndiaye (Senegal)
- Associate Professor Khaled Ould Boye (Mauritania)
- Dr. Atipo –Galloye Reddy (Congo-Brazzaville)
- Dr. Adama Sawadogo (Burkina-Faso)
- Dr. Wilfried Gandji Wilfried (Benin)
- Professor Gilbert Bonkougou (Burkina-Faso)
- Professor Bernadette Ngo Nonga (Cameroon)

- Professor Yves Tanauh (Côte d'Ivoire)
- Professor Flavien Kendja (Côte d'Ivoire)
- Associate Professor Blaise Demine (Côte d'Ivoire)
- Associate Professor Aimé Kirioua-Kamenan (Côte d'Ivoire)
- Dr. Raphael Ouede Raphael (Côte d'Ivoire)
- Dr. Ambroise Gnaba (Côte d'Ivoire)