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# PROJECT PROPOSAL

# PROVISION OF LIFE SAVING HEART SURGERIES TO SERVE CHILDREN WITH CONGENITAL AND RHEUMATIC HEART DISEASES IN TANZANIA AT BENJAMIN MKAPA HOSPITAL.

### **DODOMA, TANZANIA**

# PROJECT TITLE

HOW DO WE USE TECHNOLOGY TO AID IN THE TREATMENT OF CONGENITAL AND RHEUMATIC HEART DISEASE IN UNDERSERVED AREAS IN TANZANIA?

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# **1. SUMMARY**

### **1.0 EXECUTIVE SUMMARY**

The One New Heart Tanzania is a Non-Governmental Organization (NGO) duly registered with the Ministry of Health, Community Development, Gender, Elderly and Children in Tanzania. The One New Heart Tanzania is registered under the Non-Governmental Organizations Act section 12(2) of Act No. 24 of 2002 as Amended in 2005 with registration no. 00NGO/00010134.

The One New Heart Tanzania is established purposefully to perform the following activities:

- 1. Training and capacity building,
- 2. Facilitate pediatric cathlab diagnostic interventions,
- 3. Facilitate and provide cardiac operation camps,
- 4. Facilitate and provide life saving pediatric cardiac surgeries,
- 5. Provide and facilitate pediatric cardiac follow up and clinics,
- 6. Create awareness about pediatrics cardiac problems in Tanzania
- 7. Fundraising.

The cost intended for this project is a total of 2,339,643,535 TSHS equivalent to

**1,017,186 USD** purposely for equipping the Cardiac Theatres at Benjamin Mkapa Hospital.

#### **Type of support requested**

The organization requests financial support to cover the estimated cost of surgical equipment. However, **Donor can choose whether to provide the Organization with the equipment or finance**.

The anticipated end result of the project is to increase the quality of life for children by providing superior, accessible and affordable healthcare for children suffering from congenital and rheumatic heart disease.

Our volunteers are group of doctors and medical technologists across the world, specialists of cardiovascular healthcare and experts of pediatrics cardiac diseases. These specialists are sympathetic and willing to serve Tanzanian children suffering from congenital and rheumatic heart diseases. It is out of this desire to serve the Tanzania children and the entire community at large that gave life to THE ONE NEW HEART TANZANIA. THE ONE NEW HEART TANZANIA has set a target of serving 650 children per year and this number will increase with the availability of funds.

#### **1.1 INTRODUCTION**

THE ONE NEW HEART TANZANIA is a charitable/Non-profit and Non-Governmental Organization (NGO) duly registered with the Ministry of Health, Community Development, Gender, Elderly and Children in Tanzania under the Non-Governmental Organizations Act section 12(2) of Act No. 24 of 2002 as Amended in 2005 with registration no. 00NGO/00010134.

Our goal is to improve the health and welfare of all children, regardless of the child's religion, gender, race and financial status.

The NGO intends to facilitate cardiac operation camps at Benjamin Mkapa Hospital. The NGO has global access to specialist doctors and medical technologists who specialize in cardiovascular healthcare from different parts of the world.

### **1.2 VISION**

The Vision of THE ONE NEW HEART TANZANIA is to have a community where children with congenital and rheumatic heart diseases can get treatment and no one will die or suffer due to lack of financial support or poor health services.

### **1.3 MISSION**

The Mission of THE ONE NEW HEAR TANZANIA is to support and facilitate provision of the pediatrics cardiac treatment to all needy children in Tanzania.

# **1.4 CORE PROGRAMS**

- 1. Training and capacity building
- 2. To create awareness about pediatrics cardiac problems in Tanzania
- 3. To provide and facilitate pediatrics cathlab diagnostic interventions
- 4. To facilitate and provide cardiac operation camps
- 5. To provide and facilitate life saving pediatrics cardiac surgeries
- 6. To provide and facilitate pediatrics cardiac follow up and clinics
- 7. Fundraising.

# **1.5 TARGET POPULATION**

Our organization is targeting to serve 650 children per year.

# **1.6 NEEDS/PROBLEMS**

With a population of 57 million people, Tanzania has only one cardiac Hospital located in Dar es Salaam staffed with one (1) Pediatric Cardiac Surgeon.

The findings from our pilot study show a 30.6% increase in the number of patients with heart diseases from 64,085 in 2017 to 83,718 in 2018. A similar statistics was reported by the Government through the Ministry of Health published in The Citizen newspaper publication date 23<sup>rd</sup> January, 2019.

On average the Jakaya Kikwete Cardiac Institute (JKCI) should ideally have 50 senior cardiac specialists; a ratio of fourteen (14) patients to one (1) doctor. However, JKCI currently has a

ratio of seven hundred (700) patients to one (1) doctor. This is a strain on the current health care facility and the country is in dire need of cardiac specialists and equipment. This is where THE ONE NEW HEART TANZANIA comes in. We intend to facilitate and provide the much needed assistance as it relates to personnel and equipment in Tanzania.

In Tanzania there are currently twelve (12) cardiovascular doctors who serve the entire country (The Citizen newspaper, publication dated  $23^{rd}$  January, 2019) and while they do the best they can under the circumstances to serve their country; Tanzania is in need of assistance in this area.

According to Chama Cha Madaktari wa Watoto Tanzania statistics, (as it was reported Dr. Alphonce Chandika, Executive General Director of Benjamin Mkapa Hospital at the inauguration meeting of the Cath Lab at Benjamin Mkapa hospital 12 February 2019), each year 13,600 children are born with congenital and rheumatic heart diseases and 3,400 children need to be provided with cardiac surgery yet the JKCI is capable of providing the service to 400 children in a year.

As a result of inadequate treatment facilities and pediatric specialists in Tanzania, children with congenital and rheumatic heart diseases are taken abroad for advanced treatment.

In 2015 Peter KC Chille, Pediatric Cardiovascular Perfusionist with sponsorship from the Save a Child's Heart organization, Israel took nine (9) under privileged pediatric patients from Tanzania with pre-existing cardiac conditions to seek advance treatment at Wolfson medical centre, Tel-Aviv, Israel. This was a very costly exercise and is not accessible to most Tanzanian children.

The organization has global reach and access to international Pediatric Cardiac Specialists (Surgeons, Cardiologists, Anesthesiologists, intensivists, Pediatric Cardiac Perfuisonist, and other medical technologists) who are willing to work in partnership for free to serve our sick children and hence to improve the quality of treatment to children in Tanzania.

In a recent visit to the New Benjamin Mkapa Hospital in Dodoma, we observed that the Hospital has dedicated a wing for a Cardiac Theatre, however there are no equipment to facilitate appropriate cardiac surgeries, due to lack of funding. Therefore causing disfunctionality and unfulfilment of the intended use of the facility.

In light of these findings, The One New Heart Tanzania intends to fill this void and provide a better solution for cardiac treatment and surgeries to pediatric patients in an effort to save lives in Tanzania.

# 2. GOALS/OBJECTIVES

PROVISION OF LIFE SAVING HEART SURGERIES TO SERVE CHILDREN WITH CONGENITAL AND RHEUMATIC HEART DISEASES IN TANZANIA AT BENJAMIN MKAPA HOSPITAL, DODOMA, TANZANIA

- The NGO's primary goal is to facilitate and provide life-saving heart surgeries to serve Tanzanian children with congenital and rheumatic heart diseases. In carrying out its activities, the NGO's objective is to create a Pediatric Cardiac Centre of excellence and competence at Benjamin Mkapa Hospital.
- This will cover six hundred and fifty (650) children per year for 4 years.
- Additionally, THE ONE NEW HEART TANZANIA intends to provide Cardiac awareness to various medical officers across Tanzania.
- All these goals will be accomplished in a period of **THREE** to **FIVE** years from its begining.

# 2.0 PROCEDURES/SCOPE OF WORK

The initial establishment of the project is estimated to cover a period of three to five years.

The NGO will operate in Tanzania, specifically at Benjamin Mkapa Hospital, where children will be provided with the following:

i) Pediatrics cardiac screening and Cath Lab intervention procedure to identify cases.

- ii) Pediatrics lifesaving heart surgeries,
- iii) Pediatrics clinics and follow up care, and
- iv) Capacity building for local teams, once each camp is hosted.

# Ways of performing the organization activities to meet the vision and mission of the organization

In order to meet the NGO's vision and mission, the following activities will be carried out:

#### I) Local medical doctors team

It is estimated that the local medical doctor team will perform two (2) open heart surgeries each day, Monday through to Friday.

#### II) Hosting of free pediatric international surgical teams

The Organization will host free pediatric international surgical teams from international global partners who are non-profit organizations. The following are a list of some of the international teams who are willing to offer

The following are a list of some of the international teams who are willing to offer their support to the project:

- a. Chain of Hope from United Kingdom,
- b. Save a Child's Heart from Israel,
- c. Open Heart International from Australia,
- d. Healing Little Hearts from United Kingdom,
- e. Mending Kids from United States,
- f. Novick Cardiac Alliance from United States,
- g. Pediatric Congenital Heart Association from US,
- h. Sri Sathya Sai Sanjeevani Hospital from India.
- i. KEYIV Heart Institute from Ukraine

Hosting of free pediatric international surgical camps will be done at least **six** (6) times per year, however, it can exceed depending on the financial capability of the organization.

Once the camp is hosted, the organization intends to facilitate and provide life-saving heart surgeries. There will be at least **twenty** (20) surgical cases for children with congenital and rheumatic heart diseases for each camp.

### III) Facilitating free screening cardiac camps at Benjamin Mkapa Hospital

The organization will facilitate and provide free screening camps to pick up cases of children with congenital and rheumatic heart diseases.

#### IV) Organizing training for awareness creation

The Organization will organize training to create awareness to the society of Tanzania. This is concerning the availability of adequate facilities for treatment; provided by the organization in Tanzania.

### V) Providing capacity building for local medical teams

Once each camp is hosted, the organization will provide training to local teams and this will be done in an effort to build capacity locally while the operating team is onsite.

# **2.1 TIME TABLE**

Phase One       Fundraising to equip the theatre with surgical equipment at Benjamin Mkapa Hospital.       From August 2019 to August 202		Description of Work	Duration
	Phase One	surgical equipment at Benjamin Mkapa	

# 2.2 REQUIRED SURGICAL EQUIPMENTS

Description of Item	Cost per uni	t Unit	Total (\$)
HLM	\$ 355,00	0.00 2	710,000.00
Valve sizers	\$ 6,000	0.00 6	36,000.00
Ring sizers	\$ 6,000	0.00 6	36,000.00
ACT Machine	\$ 7,800 \$ 2,350	0.00 2	15,600.00
External Cardiac Pacemaker	\$ 2,350	0.00 10	23,500.00
<b>Dual Chamber Temporary</b>	\$ 2,500	.00 10	25,000.00
External Pacemaker	\$ 2,500		25,000.00
Octopus	\$ 988	3.00 2	1976.00
<b>Maquet Beta Classic</b> Surgical Table BETACLASIC	<ul> <li>Manual Hydraulic operated - MAQUET 1</li> <li>Surgical Table Consisting of</li> <li>Radiolucent Top.</li> <li>SFC (Special Form Core) Parely</li> <li>Longitudinal Shift. ACCESSORIES: -</li> <li>1130.64F0/07Head rest of 1118.50F0/07Pair of Leg</li> </ul>	dding. can be tilted,	78,000.00
COCOON PATIENT Temperature Maintain from 34 WARMING SYSTEM deg to 46 deg. Accessories: 2 ADULT BLANKET 2 PEDIATRIC BLANKET			5,000.00
ABG MACHINE	<ul> <li>PARAMETER:</li> <li>1. Blood gases – Ph, P02, PC</li> <li>2. Electrolytes - Na+, K+, Ca2</li> <li>3. Total hemoglobin – tHb</li> <li>4. Oxygen saturation – SO2</li> <li>5. Hematocrit - Hct</li> </ul>		61,110.00
	TOTAL PRICE		1,017,186

# 2.3 KEY PERSONNEL

In order to meet the anticipated changes in the society, the following people will be involved as key personnel of the project. They will be responsible for the completion of the project, as well as other personnel involved in the project.

Client	Children with congenital and rheumatic heart diseases		
Sponsor	Not applicable		
Project Manager	Magreth Elias		
Team	Peter KC Chille, Dr. Abdulmajid Mbarouk, Dr. Ahmed S. Toure.		

# 2.4 MONITORING AND EVALUATION

Project monitoring and evaluation shall be conducted by **the founding members of the Organization** and this will be conducted **quarterly.** However, monitoring and evaluation will be thoroughly conducted at the hospitals and the society at large where direct beneficiaries are found.

# 2.5 TOOLS AND METHODS OF EVALUATION

Various project evaluation tools will be deployed and used to assess the success and performance of the project activities; these will include formal and informal evaluation tools.

**Formal project evaluation tools** will include focus group, interview, survey questionnaires and knowledge test.

Informal evaluation tools will include observation and informal conservations.

# 2.6 OUTPUT OR EXPECTED END RESULTS OF THE PROJECT

The expected end result or output on the project activities are as follows:

i) Pediatric cardiac screening and Cath Lab intervention procedure to identify cases.

### Output.

Once a child is provided with the cardiac screening and Cath Lab intervention procedure, the cardiac doctor will be able to diagnose the problem properly and provide the child with the proper treatment, if needed.

### ii) Pediatric life-saving heart surgeries,

#### Output

The output of providing life-saving heart surgeries is to improve quality of life of the children in the society.

### iii) Initial Pediatrics clinics and follow-up care

### Output

### **Initial clinics**

This is done before treatment and once the children are provided with initial clinics, the expected result is to diagnose and treat.

### Follow-up care

The outcome of follow-up care to the children who has been provided with treatment is to look on improvement of the child. This is to know whether there's any complication on the kind of treatment which was received.

# iv) The organization will provide capacity building for local teams once each camp is hosted.

### Output

To deliver pediatric cardiac service, permanently. This activity will increase the availability of cardiac expertise, for example surgeons, cardiac intensive care nurses, anesthesiologist, intensivists, cardiac theatre nurses among others.

# 2.7 PERPETUATION AND SUSTAINABILITY OF SERVICES

It is anticipated that the organization will help to improve the quality and availability of care to children with cardiac problems. Through this NGO the community will gain the much needed pediatric cardiac services.

The NGO will continue to disseminate knowledge about pediatric cardiac problems by way of advertisement and posters and other appropriate means.

THE ONE NEW HEART TANZANIA shall be ready to provide the helpless with the following as far as the Constitution is concerned:

- a) Life-saving heart surgeries.
- b) Clinics and follow-up care.
- c) Operation camps.
- d) Educating healthcare professionals who are ready to solve the Tanzanian cardiovascular diseases.
- e) To create a Pediatric Cardiac Centre in Tanzania.

# 3. CONCLUSION

We donate our effort, time, and skills to reduce the number of children who are referred abroad for cardiac treatment.

The anticipated end result of the project is to improve the quality of life for children suffering from cardiac problems. THE ONE NEW HEART TANZANIA is aiming to facilitate and provide the opportunity for those children who are suffering from congenital and rheumatic heart disease to receive specialized health care that they deserve and cannot access.

# **3.0 ENDORSEMENTS**

Currently there isn't any individual or company who supports the project, and hence the organization seeks people to support the organization on the success of the project.

# 3.1 NEXT STEPS

The specified reader of this document is the Community, where the organization requests for support to Start up the proposed project.

# Prepared and signed this 3<sup>rd</sup> of September 2019 by;

Dr. Abdulmajid Mbarouk

MD,MMED,PhD, Cardiovascular surgeon **Executive Managing Director** 

CONTACT PERSON

wa.

Magreth Elias (LLB). Executive General Secretary

THE ONE NEW HEART