



**ATMA-LHF Project 001: Medical Equipment  
Project**

***PROPOSAL FOR  
PROCURING MEDICAL EQUIPMENT FOR  
THE LADAKH HEART FOUNDATION  
HOSPITAL***

## **BACKGROUND**

A Thousand Metres Above (ATMA) is a Canadian non-profit organization that provides funding for projects seeking to improve the well-being of people residing in mountainous regions around the world. The ATMA fund provides grants to local organizations working to address the unique development challenges inherent to their mountain communities. ATMA was established in 2012 by Indy Sahota, a medical researcher interested in high altitude physiology and public health.

The Ladakh Heart Foundation (LHF) is a non-profit, non-political charitable trust. It was established in 1997 by Ven. Thupstan Chogyal, a Ladakhi monk, and has been registered by the Jammu & Kashmir Government (registration No.2718-S; dated 21 February 1997). The organization was originally created to address the high prevalence of acquired and congenital cardiovascular disorders in the region as well as to address other serious health problems that affect the local community. Given the high altitude, remote mountain environment, harsh climate and limited accessibility to the outside world, especially during the winter months, the people of Ladakh experience considerable health problems. The LHF has since expanded beyond treating cardiovascular disease alone and now offers treatments for all conditions.

## **OBJECTIVES OF THE LHF**

The LHF is committed to:

- Providing surgeries and diagnostic clinics to the people of Ladakh
- Providing free education and prevention programs to the people of Ladakh
- Providing emergency health services to the people of Ladakh
- Providing mobile clinics to outlying and remote villages of Ladakh
- Maintaining a registry of the health status of all patients in the region and to continuously monitor their conditions

- Providing the above services at a limited cost so as to allow healthcare to be accessible by all, regardless of their financial situation
- Working alongside government health facilities to provide quality healthcare to the people of Ladakh

## **CURRENT SITUATION**

Ladakh is the largest district of the Indian state of Jammu & Kashmir. Its large geographic size, low population density and limited accessibility to many of the villages and towns in the district all place a considerable strain on healthcare provision in Ladakh. The people of Ladakh have limited access to either health education or the staff and equipment needed to diagnose and treat their conditions. Furthermore, the majority of patients who attend health facilities in the region cannot afford the high cost of treatment. Limited road access, and harsh climates that close many parts of Ladakh to the rest of India for much of the year, make it difficult for the people of Ladakh to access the healthcare they require throughout the year.

Currently, residents of Leh have access to Sonam Norbu Memorial Hospital (SNMH), which is located in the city centre. Here, quality care is provided; however, SNMH cannot meet the demand of the rapidly growing population of Leh. Furthermore, SNMH is currently unable to perform more complicated surgeries, such as severe trauma cases, tumorous cancer removals, cardiac procedures, etc. Therefore, the people of Ladakh who require such complex surgeries are forced to travel the long distance to Chandigarh or New Delhi to seek treatment. Given the high cost of travel, accommodation and treatment many people in Ladakh cannot afford these services.

Since 1997 the LHF has been working to address these issues. In 2009 a hospital was constructed in Leh that offers affordable, quality care to all those that attend. This hospital is a state-of-the-art building that has been designed to maximize energy efficiency and minimize its environmental impact. From 2009 to 2011 the hospital treated 8,273 patients (345 patients per month), in addition to the many patients that

were served in their local communities by mobile field clinics. However, before the hospital can become fully functional, it is imperative that we procure more medical equipment that will allow us to serve even more people.

## **BRIEF SUMMARY OF THE PROPOSAL**

We are currently seeking funding to buy medical equipment that would allow us to expand our current diagnostic laboratory, perform life-saving surgical operations and better diagnose and treat patients who attend the Ladakh Heart Foundation Hospital & Research Centre.

## **DETAILED PROPOSAL**

The main hospital building has now been constructed that provides affordable consultations with physicians and specialists, access to medications, blood diagnostic testing and free education and awareness programs to residents of Ladakh. The next major step is to procure the equipment required for an operating theatre that can provide affordable, high quality surgeries to those in need who cannot afford the prohibitively expensive costs of surgeries at other hospitals. We currently have several specialist surgeons who work at the Ladakh Heart Foundation Hospital & Research Centre as volunteers. In addition, we have an agreement with surgeons at the All India Institute of Medical Sciences in New Delhi to travel to the hospital yearly to perform more complex surgical procedures. We, therefore, have recruited the necessary personnel to deliver these surgeries; what are now required are the funds to purchase the operating room equipment.

In addition to the operating theatre, we are in the process of expanding our diagnostic laboratory and procuring more medical equipment, such as X-rays and respiratory monitors, to help better diagnose the patients who visit the hospital. Many of these pieces of equipment are a necessity for modern-day hospitals and we hope, that

through grant funding and other private donations, we will soon be able to procure them for the Ladakh Heart Foundation Hospital & Research Centre.

Finally, although the main building site of the hospital has been constructed, much of it remains empty and we are, therefore, in desperate need of more patient beds, dressing trolleys, crash carts, examination tables and other amenities required within a fully-functional hospital. This equipment will allow us to better serve the people of Ladakh.

## **PROJECTED COSTS**

### **DESCRIPTION**

Many different pieces of medical equipment as well as other hospital equipment are required to better serve the people of Ladakh. These items, in addition to their costs, are described below in two separate sections. The first section relates to costs associated with medical equipment and the second relates to costs associated with hospital amenities and other hospital equipment. All costs are provided in Canadian Dollars.

**COSTS: MEDICAL EQUIPMENT**

<b>Equipment</b>	<b>Cost Per Item (\$)</b>	<b>Items Req'd</b>	<b>Total Cost (\$)</b>
Endoscopy machine	20,000	1	20,000
Vital signs monitor	5,040	3	15,120
Large x-ray machine	16,000	1	16,000
Autoclave machine	6,000	1	6,000
Respiratory monitor (respirometer)	N/A	1	N/A
12-lead ECG	500	1	500
Neo-natal resuscitation unit	1,600	3	4,800
Pulse oximeter	140	5	700
Anaesthesia machine	9,870	1	9,870
			<b>72,990</b>

**COSTS: HOSPITAL AMENITIES**

<b>Equipment</b>	<b>Cost Per Item (\$)</b>	<b>Items Req'd</b>	<b>Total Cost (\$)</b>
Patient bed	120	25	3,000
Intensive Care Unit bed	1,000	5	5,000
Operation table	4,090	1	4,090
Operation lamp	370	1	370
Generator 63kV	17,800	1	17,800
Trauma crash cart	N/A	2	N/A
Bedside table	50	25	1,250
Pillows	7	25	175
Bed sheets	20	25	500
Lockers	300	6	1,800
Examination table	70	3	210
Labour table	N/A	1	N/A

Oxygen cylinder & gauge	120	30	3,600
Screen	48	5	242
Dressing trolley	163	3	488
Overbed table	40	5	200
			<b>38,725</b>

## **IMPACT OF THE PROPOSAL ON THE COMMUNITY**

Procuring the medical and hospital equipment listed above will have an enormous impact on the health of the people of Ladakh. Given the harsh climate, physical remoteness, large geographic size of the district and the relatively small population, the people of Ladakh have limited health facilities provided to them. Currently, people in the district who require complex surgical procedures and diagnostic testing must travel long distances to receive these services; at prohibitively expensive costs. At the Ladakh Heart Foundation we have been able to construct a state-of-the-art hospital in Leh. Furthermore, we have been able to recruit award-winning physicians and specialists, such as Dr. Tsering Norboo, winner of the Jammu & Kashmir Award for Meritorious Public Service, published researcher and surgeon, Dr. Tsering Lhadol, winner of the Government of India Padma Shree Award and accomplished gynaecologist, and Dr. Norbu Tsering, former Chief Medical Officer of Leh. These doctors, as well as the other nurses and medical staff at the Ladakh Heart Foundation Hospital & Research Centre have considerable experience in providing healthcare to the people of Ladakh both in private and government institutions. Our highly qualified and decorated staff, as well as the state-of-the-art hospital we have constructed in Leh, means we are in a pivotal position to provide high quality, affordable health services to the people of Ladakh.