

KOTAGIRI MEDICAL FELLOWSHIP HOSPITAL

Opportunities for involvement in the work at KMF

Vision: The hospital seeks to fulfill the need for a reliable secondary level medical facility in the Nilgiris.

Background and history of KMF

Kotagiri Medical Fellowship hospital (KMF) is a 50-bedded hospital in the town of Kotagiri, located in the hilly Nilgiris District of Tamil Nadu, India.

KMF was started by a couple of intrepid women missionaries from England, Ms. Monica Sutton and Ms. Vera Nowell when confronted with the tremendous need for medical work among the people in the hills. In 1937, they repaired an abandoned cowshed on the plot of land they had bought, and with the help of a couple of locals converted it into a dispensary with an operating table.



Dr. Pauline Jeffrey, an eye specialist from Denmark and Dr. Herlufsen, a physician, were the pioneering doctors who played an important role in serving the local population. After 1941 the hospital grew from the cowshed to have several blocks of buildings and reached a peak between 1980 and 1995. Following this period, there was a gradual decline in the affairs of the institution due to several reasons. The management of the Trust approached Christian Medical College Vellore (CMC) to help revive the hospital and in August 2017 an MoU was signed between KMF and CMC for the day to day running of the hospital. Since then CMC has been striving to revitalize the hospital and its activities in the community around it.

Why do we need to revive the hospital?

KMF hospital has a history of serving people, not just from Kotagiri but from all over the Nilgiris District. Today, despite the presence of several small general practice clinics, there is still no reliable hospital facility in the entire district where one can go in a time of serious sickness or emergency. An informal survey showed that most people, regardless of their financial ability, are forced to travel 2 hours or more to Coimbatore for almost every kind of serious illness. Many, especially those with cardiac problems, stroke and other critical illnesses worsen or perish along the way. This is especially true with those who are economically disadvantaged. Therefore, there is no doubt that there is, even today, a great need for a reliable hospital facility that can cater to the medical needs of the entire district.

Current situation

CMC'S involvement started with an informal needs assessment in the initial few months and multiple consultations with village leaders and other prominent members of the local population. Monthly medical camps were held in the surrounding villages which provided a fair idea of the medical needs of the community. For example, it was found that there was a high incidence of varicose veins because the economic activity of most of the population was tea-picking which involves long periods of standing. Vascular surgeons were invited to address this problem and there has been an overwhelming response over the last 4 months, with some laser surgeries being performed in June 2018, and more procedures planned in the future. Some other common illnesses identified were heart problems (especially myocardial infarction), stroke, diabetes, joint-related illnesses etc. Chronic illnesses related to old age and otherwise are also fairly

common. The management of these conditions requires the services of trained physicians and surgeons and also good infrastructure and medical equipment for diagnosis and treatment.

With CMC's involvement, the hospital has shown signs of recovery, with a gradual increase in patient numbers. Currently the hospital has three residential doctors trained to handle most conditions and a few visiting consultants. Specialists from CMC come to visit and regular medical consultations have been held over the last 6 months. Monthly visits by a vascular surgery team and specialists from the Pulmonary Medicine Department have had an encouraging response. Open surgery and laser procedures have been conducted. Doctors from Psychiatry, ENT, Neurology, Neurosurgery, Ophthalmology, and Cardiology have also had consultations in KMF Hospital at various times.

Priority needs and plan for revival

We have identified the following top priority objectives that will provide the foundation for a sustainable hospital meeting the majority of the medical needs of the local population:

- Develop a well-equipped ICU
- Establish a reliable laboratory facility
- Upgrade the operating theatre and radiology services.

Details of these requirements, along with approximate costs are given below, in order of priority.

PRIORITY 1 - IMMEDIATE NEEDS

This equipment is needed immediately for optimal functioning of the hospital.

Intensive Care Unit (ICU)

A well-equipped intensive care unit will enable the doctors to treat very sick patients, especially those who require support for breathing and maintenance of blood pressure, and those who have had cardiac arrest, myocardial infarction, stroke and other critical illnesses. An ICU also provides a back-up for surgeries, especially those that may require management of sick individuals post-operatively (Eg. head injury, abdominal sepsis etc.). Currently there is no ICU facility in the entire Nilgiris district, and it is desperately needed. Establishing it will save lives, providing accessible critical care for the local population.

Timeline – The following items are required by the month of August 2018. They can be put to use at once with immediate benefits.

Intensive Care unit		
Equipment	Cost in INR	Remarks
Ventilator	7 - 8 lakhs	Used for very sick individuals to assist in breathing.
Pulse oximeter	1.5 lakhs	Measures oxygen saturation in blood in sick persons.
Monitor	1.5 lakhs	Monitors blood pressure, ECG and other vital parameters.
Other Equipment	50,000 - 1 lakh	Intubation equipment, ambu-bag/mask etc.

Laboratory facility

A good laboratory is the backbone for effective clinical services in a hospital. Currently KMF has basic laboratory facilities with monthly quality control (CMC-EQAS) with CMC Vellore. However, there are several tests that require samples to be sent to Coimbatore, which increases cost and the time taken for a result. For example, there is a high incidence of thyroid disorders and cardiac illness in Nilgiris and the tests that measure hormones and enzymes in these

disorders requires an automated biochemistry analyzer. This would give results within one or two hours instead of one or two days.

With a clinical pathologist joining the staff soon, and the quality assurance oversight of CMC Vellore, we should be able to provide optimal laboratory support.

Timeline – The following items are required by the month of August 2018. They can be put to use by October 2018.

Laboratory		
Equipment	Cost in INR	Remarks
Automated biochemistry analyzer	25 lakhs	Hormonal assays, cardiac enzymes, tumor markers etc. This machine can ensure quick results, reducing the dependence on labs in far-off cities.
Ultrasound machine	12-16 lakhs	Ultrasound diagnosis of illnesses, pregnancy. Currently we have a 17 year old machine which is very outdated. A new machine will greatly improve diagnostic services.

Operating theatre

The operating theatre immediately requires a vaporizer, an attachment essential for administering general anesthesia. Besides this there is a need for other equipment like overhead operating lights and other equipment which will ensure optimal, quality surgical services.

Timeline – These items are required by the month of August 2018. They can be put to use immediately.

Operating Theatre		
Equipment	Cost in INR	Remarks
Overhead lights - 2 units	85,000 - 1 lakh	Provides light during surgical procedures. The current light source is only partly functional and very old.
Anesthesia machine vaporizer	75,000	Helps in giving anesthetic gases for general anesthesia.
Bipolar cautery, and other equipment	50,000	Equipment used for stoppage of bleeding during surgeries. Other equipment are used for surgical procedures.

PRIORITY 2 - SHORT TERM NEEDS

This includes equipment and other needs that are needed in the short term - 3-6 months.

Imaging / Radiology services

Radiology services like CT scan and X-ray provide valuable support for making clinical decisions. The current X-ray machine is usable but is dependent on manual processing of films. This is an outdated technology and involves repeated expenditure. Upgrading to a digital X-ray unit vastly improves quality of x-rays and is cheaper in the long run, compared to the present method.

A CT scan is necessary for a secondary level hospital, especially in the diagnosis and treatment of neurological conditions like stroke. It is also useful in diagnosis of surgical and orthopedic/spine diseases. At present there are no reliable CT machines in the vicinity, and those in other centers are either unreliable or of substandard quality. Patients need to go to Coimbatore for quality CT scans. With a neurosurgeon joining the hospital soon, the presence of a CT machine will provide the necessary support for management of head injuries, stroke and other disorders.

Timeline - These items are required by the month of October 2018. They can be put to use by November 2018.

Radiology Services		
Equipment	Cost in INR	Remarks
Digital x-ray equipment (CR machine)	9 lakhs	Used to take x-rays and print films.

Ultrasound machine	12-16 lakhs	Ultrasound diagnosis of illnesses, pregnancy. Currently we have a 17 year old machine which is very outdated. A new machine will greatly improve diagnostic services.
CT (spiral) machine 4-slice	1.6 crore	For diagnosis and treatment of stroke, head injury, chest and abdominal illnesses, orthopedic/spine disorders.
Computerized PACS and Hospital Management system	5 lakhs	Enables x-ray and CT images to be seen on a computer in the out-patient department, improves diagnostic ability of doctors. Medical reports and imaging reports and discharge summaries can be printed and data can be stored for future retrieval.

Laboratory

The following items are needed to support the ICU, for diagnosis of HIV and Hepatitis and for pre-operative investigation.

Timeline - Required by the month of October 2018. They can be put to use by November 2018.

Laboratory services		
Equipment	Cost in INR	Remarks
ELISA machine	1.5 lakhs	HIV and Hepatitis screening and diagnosis. It can also be used for diagnosis of a variety of other illnesses that require ELISA.
ABG machine	1.5 - 2 lakhs	Used as an adjunct to a ventilator in ICU to determine the adequacy of ventilation and to detect disorders of oxygenation and acid-base disorders.

General needs and other equipment

There are some other needs that are not so urgent but are required in the coming 6 months.

An emergency staircase is required to fulfill statutory requirements for fire safety. The hospital stands to lose its fire safety license without this. A good fence around the property ensures that wild animals like Gaur do not enter the premises and provides a sense of security for staff, especially those who come from outside the Nilgiris.

A good blood bank facility is invaluable for sick patients especially for those who require blood transfusion due to loss of blood, following surgery or for other illnesses. With a clinical pathologist and transfusion medicine specialist joining the staff in October 2018, we can work towards starting a blood bank, which will be of great benefit to the local population.

Some other needs are mentioned along with these, with the approximate cost.

Timeline - These are required by the month of October 2018. They can be put to use by December 2018.

Radiology Services		
Equipment	Cost in INR	Remarks
Emergency exit staircase	5 lakhs	Required for fire-safety statutory regulations.
Cold light source	50,000 - 1 lakh	Examination of patients
Fencing for the hospital	15 lakhs	Protection from wild animals, provides a sense of security to workers in the hospital.
Blood bank equipment	8 - 10 lakh	To start blood bank services that will provide support for sick patients and for surgeries.
Small ambulance	8 lakhs	To transport sick patients to a higher facility or from their homes to the hospital.
Diathermy machine	2 lakhs	Equipment used for stoppage of bleeding during surgeries.
Nursing education for one student	50,000 per year	

Bank details and other information

Donations to KMF hospital are eligible for 80G tax exemption. Donations can be made by cheque or DD payable to “Kotagiri Medical Fellowship Hospital, or directly into the hospital bank account.

Account Name - **KOTAGIRI MEDICAL FELLOWSHIP HOSPITAL**
Account Number - **1958914021**
IFSC Code - **CBIN0281010**
MICR Code - **643016302**
Name of the Bank - **CENTRAL BANK OF INDIA, Branch - KOTAGIRI**
Type of account - **Savings account**

Thank you for your interest in this worthwhile project. Please contact me if you would like any further details, or if we can answer any questions.

Yours sincerely,



Dr. Tony Abraham Thomas (M.Ch. Neurosurgery)
Medical Superintendent
Kotagiri Medical Fellowship Hospital