



The International Association of Lions Clubs

(Lions Clubs International)®

District 325 E, MD 325, Nepal

L/Y 2022 - 2023

Proposal
for
LCIF Humanitarian Programs
(Medical Equipment Upgrade)
at
Kirtipur Skin Hospital.

Submitted to

Lions Clubs International
District 325 E, MD 325, Nepal

Submitted by

Lions Club of Kathmandu Pashupati Nath (60130)
August 5, 2022



The International Association of Lions Clubs

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District 325 E, MD 325, Nepal

L/Y 2022 - 2023

Respected District Governor

The International Association of Lions Clubs

Lions Clubs International

District 325 E, MD 325, Nepal.

Sub.: Proposal for Medical Equipment Upgrade at Kirtipur Skin Hospital.

Respected Sir,

We take this opportunity to introduce Lions Club of Kathmandu Pashupati Nath (60130) which was chartered under district 325 E (150641) in 1997 and is dedicated to serving the community with the motto of "WE SERVE" under Lions Club International values and ethics. The Lions Club of Kathmandu Pashupati Nath has conducted more than 100 programs every year for the community. We are dedicated and serving the community under the ethics and code of Lions Club International.

To expand and increase the reach to the community and make extensive reach throughout Nepal. We would like to propose for your kind approval the project "Medical Equipment Upgrade at Kirtipur Skin Hospital". The upgrade of the medical equipment in Kirtipur Skin Hospital will help the burn patient of Nepal.

1. Medical Equipment will be dedicated for Burn patients for transplantation services.
2. Save the outflow every year from Nepal to other countries for treatment including transplantation services.
3. Use of new technology for improving efficiency with lower maintenance costs.
4. Serve to treat burn patient and make the same available to needy people from all part of Nepal.
5. Be equipped for new procedures to provide better patient care.
6. This could become one of the projects for Lions which in turn will enhance the image of Lions in Nepal and globally.
7. To serve the overall country of Nepal by helping in skin donation.

We hope you will find this project suitable for LCIF funding and would like to request for your kind review and approval.

Sincerely Yours

Lion Bimal Kumar Shrestha MJF

Club Secretary

Lion Hridaya Man Shrestha

Club President

Proposal to Lions Clubs International

For Improvement in Burn Care at Nepal Cleft & Burn Center, Kirtipur Hospital, Kathmandu, Nepal

Introduction:

According to WHO, 95% of 11 million people who sustain burn injuries every year globally are from lower- and middle-income countries? Just as many women in the world sustain moderate and severe burn injuries every year as they are diagnosed with HIV and AIDS. Fire burns alone kills 320,000 people every year worldwide. More than 50% of these people who die are from South East Asia alone. This is why WHO considers South East Asia as the epicenter of burn injuries.

Government of Nepal, Ministry of Health and Population has reported in 2008 that over 55,000 people sustained burn injuries in a year in Nepal. These injuries were fatal in 2100 people. Thus, together with the high incidence of burn injuries, burn mortality is also found to be higher in the lower- and middle-income countries including Nepal.

In Nepal, treatment of burn patients is not well organized. There are very few plastic surgeons in the country and even fewer working in hospitals out of Kathmandu valley. The number of beds available for admitting patients with burn injuries even in the capital city of Kathmandu is very small. The Nepal Cleft and Burn Center in Kirtipur Hospital is the sole burn center with dedicated burn ICU and dedicated operating rooms for the care of these unfortunate patients in the whole country of Nepal.

Situation in Nepal:

Just like in most low- and middle-income countries, the outcome of acute burn care in Nepal is very poor. There are many reasons for this e.g. late arrival of burn patients in the treatment center, poor economic conditions of patients and very expensive burn treatment, lack of proper physical infrastructure for taking care of acute burn patients, lack of trained human resource and lack of access to proper technologies which are mostly too expensive for poor and middle income countries. The number of burn patients is also very high in these countries while the resource is very little. In Nepal Cleft and Burn Center of Kirtipur Hospital, run by Public Health Concern Trust-NEPAL (Phect-NEPAL), the number of patients admitted for the care of acute burn injury has been increasing every year but our resources have not. The number has increased not because of the increasing incidence of burn injury but because more patients are being referred to this burn center which is the only center with dedicated Burn ICU with 7 beds and two dedicated operating rooms for burn patients. In year 2019, patients came from 73 out of 77 districts of Nepal in addition to some patients from India; 92% of all the admitted patients came from outside of Kathmandu. The center also has the largest number of plastic surgeons and plastic surgery residents in the country. This is the reason why this hospital has been able to take care of acute burn patients.

Year	Number of admitted patients	Remarks
2014	90	
2015	194	More than double of previous year
2016	373	Almost double of previous year
2017	495	
2018	608	
2019	623	119 admitted in the month of January alone
2020	519	COVID19 pandemic
2021	622	
Total	3524	

Analyzing the mortality data of our patients, we were shocked to find out that in 2014 (the first year of establishment of acute burn care service), we were not able to save anybody with 40% and more total body surface area (TBSA) burns in our center. One of the reasons was the lack of skin substitutes eg allografts (from another human) or xenografts (from other animal species e.g. pigs, fish) since the patient's unburnt skin is not enough to resurface the burnt areas as we cannot harvest skin from many parts of the body e.g. face, neck, axilla, groins, perinium, joints, etc. In 2015 and onwards, we were able to save few patients with 40% TBSA burns by using skin from the patients' live relatives and cadaveric skins but the largest TBSA burn victim so far saved in our center is only one case of 55% TBSA burn who received skin donations from three of his relatives. In developed countries, almost half of the patients with as much as 90% TBSA burns survive but at a very high cost- around \$ 1 million for one such patient. It is also very expensive in resource scarce countries like ours. Victims have to pay out of pocket and most of the time it is not affordable. There is very little investment in the development of burn care and also limited or no support to the burn victims for treatment from the state.

Every winter, we see a surge of acute burn patients since many elderly women and post delivery women try to warm themselves in open fire during which their clothes catch fire and they sustain severe burn injuries leading to death of many. The last winter in November-December, 2019 and January-February, 2020 the surge was of an epidemic proportion- five times more than the usual number of patients had been admitted in the burn center. We were admitting as many as eleven patients of burn injuries in a day. There were 50 to 65 burn patients getting treatment the ward at any time during those four months in a general hospital which has a total bed capacity of only 100. With inadequate instrument and supplies, it is very difficult to provide a quality service to these poor and unfortunate victims of burn injuries.

Proposal for equipping the burn center:

Any medical facility needs adequate and proper medical and surgical equipments for delivering a standard of care.

The burn care facility at Nepal Cleft and Burn Center, Kirtipur Hospital could provide better care with some improvements in the equipments and supplies. A request is made to consider in acquiring the following items for the burn center.

	Items/Equipment	Requested Numbers/PiecesX Estimated cost per item	Total estimated Cost	Remarks
	Patient monitor with NIBP, pulse oxymeter, ECG, RR, Temperature	10 X 101,135	1,011,350	For monitoring of patient's conditions in the ICU
	Patient monitor with IBP, pulse oxymeter, ECG, RR, Temperatur	2X 178,730	357,460	For more invasive and continuous monitoring of patients conditions (includes arterial blood pressure) for critically ill burn patients
	Mechanical Ventilator	3 X 1,879,500	5,638,500	Some patients need support in their breathing mechanically especially in the ICU
	Blood Warmer	5 X 32,770	163,850	Blood from refrigerator is cold and needs to be warm before transfusion
	Infusion pump	10 X 90,265	902,650	Certain drugs need to be injected mechanically in a fixed dose delivery
	UV lights Sources	1 X 187,000	187,000	UV light kills germs in the operating rooms to prevent infection
	Quick Sterilizer	1 x 800,000	800,000	It helps in sterilizing the surgical instruments in short time. It is useful in situations where large number of surgeries need to be done with limited supply of surgical instruments.
	OT light	2 x 262,445	524,890	OT lights help visualization during surgery

	Items/Equipment	Requested Numbers/PiecesX Estimated cost per item	Total estimated Cost	Remarks
	Blades for Humby Knives	500 X 1500	750,000	Needed for Humby knives for excising burn wounds
	Humby Knives	2 X 24,570	49,140	Used for excising burn wounds and harvesting skin grafts
	Meek Micrograft Gauzes	50 X 17,700	8,85,000	For expanding skin to large proportions so that large burn wounds can be covered with smaller skin grafts. Very useful in treating extensive burns where skin donor site is limited.
	Tourniquet	1 x 227,000	227,000	Used for bloodless surgery of the arms and legs
	Cautery machine	1 x 278,456	278,456	It is necessary during surgery to stop bleeding
	OT table	1 x 487,676	487,676	OT tables are required to keep the patients during surgery
	Anesthesia machine with vaporizer	1 x 1,663,579	1,663,579	This is required for safe anesthesia
	Grand Total		13,926,551	+ 13 % VAT
			15,737,002	= 129,448 USD
	Administrative cost	1000 USD		139,448 USD

Project name/title: Burn care improvement project Kirtipur Hospital

Amount of funding requested from LCIF in US \$ 100,000

Section 1: Project Description, Goals and Objectives

1. Problem identification and justification for the project. Explain the following

- a. **The particular problems to be addressed:** To improve the quality of acute burn care in Nepal through provision of equipment and instruments in resource limited set up.

- b. **Detailed reasons and justification for the project:** According to World Health Organization (WHO), 95% of 11 million people who sustain burn injuries every year globally are from lower- and middle-income countries. Just as many women in the world sustain moderate and severe burn injuries every year as they are diagnosed with HIV and AIDS. Fire burns alone kills 250,000 people every year. More than 50% of these people who die are from South East Asia alone. This is why WHO considers South East Asia as the epicenter of burn injuries.

Government of Nepal, Ministry of Health has reported in 2008 that over 55,000 people sustained burn injuries in a year in Nepal. These injuries were fatal in 2100 people. Thus, together with the high incidence of burn injuries, burn mortality is also found to be higher in the lower- and middle-income countries including Nepal.

In Nepal, treatment of burn patients is not well organized. There are very few plastic surgeons in the country and even fewer working in hospitals out of Kathmandu valley. The number of beds available for admitting patients with burn injuries even in the capital city of Kathmandu is very small. The Nepal Cleft and Burn Center in Kirtipur is the sole burn center with dedicated burn ICU and dedicated operating rooms for the care of these unfortunate patients in the whole country of Nepal.

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Analyzing the mortality data of our patients, we were shocked to find out that in 2014, we were not able to save anybody with 40% and more total body surface area (TBSA) burns in our center. One of the reasons was the lack of skin substitutes eg allografts (from another human) or xenografts (from other animal species e.g. pigs, fish) since the patient's unburnt skin is not enough to resurface the burnt areas as we cannot harvest skin from many parts of the body e.g. face, neck, axilla, groins, perinium, joints, etc. In 2015 and onwards, we were able to save few patients with 40% TBSA burns by using skin from the patients' live relatives and cadaveric skins but the largest TBSA burn victim so far saved in our center is only one case of 55% TBSA burn who received skin donations from three of his relatives. In developed countries, almost half of the patients with as much as 90% TBSA burns survive

but at a very high cost- around \$ 1 million for one such patient. We, in Nepal, always thought that there is no way to save our patients with major burns.

Every winter, we see a surge of acute burn patients since many elderly women and post delivery women try to warm themselves in open fire during which their clothes catch fire and they sustain severe burn injuries leading to death of many. The last winter in November-December, 2019 and January-February, 2020 the surge was of an epidemic proportion- five times more than the usual number of patients had been admitted in the burn center. We were admitting as many as eleven patients of burn injuries in a day. There were 50 to 65 burn patients getting treatment the ward at any time during those four months in a general hospital which has a total bed capacity of only 100. With inadequate instrument and supplies, it is very difficult to provide a quality service to these poor and unfortunate victims of burn injuries.

- c. **Goals and objectives to be achieved:** The project aims to drastically improve the standard of care of acute burns in Nepal. As mentioned earlier any deep burn more than 40% TBSA have difficulty surviving while many other smaller burns also die with an overall hospital mortality of around 20% as per the Kirtipur Hospital data which has not changed over last seven years. As there are many reasons for this unacceptably high death rate, these can be largely prevented through multi-pronged approach. One of them is improving the quality of care in the hospital through equipping the facility with better equipment.
- d. **Geographical area and communities that will be served including socio-economic data:** Kirtipur Hospital receives more than 90% of the burn patients from outside of Kathmandu. They had come from 72 out of 77 districts according to 2019 data. Most of these patients are from lower socioeconomic stratum. Burn care is very much resource intensive and expensive especially for the poor patients who constitute the highest proportion of burn patients.
- e. **Number of people who will directly benefit from the project on annual basis:** Looking at the data, more than 600 burn patients get admitted in Kirtipur Hospital. All of these will be benefited from these projects. With improved service delivery, we expect the number to rise significantly as there is no other facility to take care of burns effectively.

2. Project strategy and plan of action. Provide the following information:

- a. **Detailed plan for this project, indicating how the objectives will be reached:** Our hospital has adequate number of surgeons trained to take care of burns (8 fully qualified plastic surgeons) beside nurses, physiotherapists, nutritionists to name a few). Only thing that is lacking is the supplies and equipment to furnish our burn ICU and OT. Furnishing our burn ICU an OT is going to improve the quality of care hence improve the survival of the patients. It will also allow us to take care of more challenging cases at our center.
- b. **If the goal is to expand services to reach more people in need, indicate how many people have benefitted to date:** We have served around 3500 burn victims in the last seven years since the inception of the burn services at Kirtipur Hospital. Our team has

been striving to provide the best possible care to the burn patients with the available resources. However, we feel constrained due to lack of instruments and equipment while treating burn patients in the burn ICU. Availability of proper instruments and equipment will help us raise the standard of care.

- c. **Background information and an explanation of the supporting role of any other organizations participating in this project:** America Nepal Medical Foundation has committed to come up with the matching fund amount of 35,000 USD. Commitment letter is attached with the email.
 - d. **Project timetable for implementation and completion including key milestones.** Four months total: two months for tender and purchasing, and two months for installation and orientation on handling of the equipment.
 - e. **If the plan is to build a permanent structure, give a physical description of the facility, its contents, including dimensions, architectural drawings, photographs and construction cost estimates, include documentation to verify land ownership:** No
 - f. **If plans are to purchase capital equipment and similar items, please provide description of usage; include product brochures, pro-forma invoices, and supplier price quotations for all items to be purchased.** See the table above.
3. **Explain how the project will be sustained in future years. Describe who will be responsible for operational, maintenance and administrative expenses. Provide a detailed five year financial plan outlining operating income and expenses. The local vendor supplying the instruments will provide 18 months of warranty period during which it will do the required maintenance and service required.** America Nepal Medical Foundation (donor agency for the matching fund) will approach the National Invention Center based at Kathmandu to tag their biomedical engineer with the same from the vendor with the aim to train the local engineer. The local engineer, in turn, will do the required future maintenance and servicing free of cost.
4. **Describe how Lions will be involved in the proposed project.**
- a. **Explain the Lions' roles and responsibilities; include relevant history relating to Lion's involvement:** Lion's club has helped us establish Nepal Skin Bank. We have worked with local Lion's in various parts of the country to collect cleft and burn deformed patients in different outreach centers in the country. Lions has also partnered with us in conducting several of the burn awareness trainings in different parts of the country. Many of the Lions have been trained to provide such trainings to other people (training of the trainer).
 - b. **Outline plans for Lions' continued participation after LCIF support has concluded.** Regular supervision by local Lion's to see the condition of the instruments, interacting with the patients on a regular basis.
 - c. **Indicate how this project will be identified and promoted as Lions supported project:** We will put a plaque indicating that this project was supported by Lions. The plaque will

also acknowledge America Nepal Medical Foundation for supporting with the matching fund.

- d. **Describe the plans for recognizing the support and involvement of LCIF.** Any publicity materials and media regarding this project should acknowledge the support and involvement of LCIF and local Lions.

5. Include an itemized budget for the entire project using the format below:

- a. Income must equal expenses
- b. Indicate which currency is being used and the exchange rate to US dollars.
- c. In the income section, list all the funding sources separately and specify the amount each is contributing.
- d. Clarify the status of each income source as pledged, collected or anticipated. For pledged and anticipated amounts, indicate the date by which the funds will be readily available for the project.
- e. In the expenses section, list and itemize all expenses items.

Currency type

Exchange rate to US dollars 1=120 NRs

Income				Expenses			
Source	Amount	Status	Notes	Expenses Description		Amount	Explanation of Expense
Lions	1,00,000	Anticipated		1	List of Instruments		
		Pledged		2			
				3			
Partners	35,000			4			
				5			
				6			
				7			
LCIF				8			
				9			

Please see the table above

- 6. Provide contact information for all Lions and non-Lions that should be copied on future correspondence regarding this application. This should include current Lions leadership, the project coordinator, as well as the current LCIF multiple district/district coordinator. Please provide a name, title, mailing address, telephone number and email addresses for all persons.