



DIALYSIS MACHINES SUPPORT FOR DHULIKHEL HOSPITAL

Dhulikhel, Nepal

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Background

Chronic Kidney Disease (CKD) is a growing public health concern in Nepal, with increasing cases attributed to diabetes, hypertension, and limited awareness. However, access to dialysis treatment remains inadequate, especially in rural and semi-urban areas. This project aims to address the healthcare gap by installing dialysis machines in strategically selected hospitals across Nepal, improving affordability, accessibility, and survival rates of CKD patients.

Nepal has a limited number of dialysis centers, with the majority concentrated in urban hubs like Kathmandu and Pokhara. Many patients in remote districts are forced to travel long distances or go untreated due to a lack of facilities. According to the Nepal Health Research Council, CKD is among the top 10 causes of mortality. Early intervention and access to dialysis can significantly reduce fatality. The cost and travel burden disproportionately affect lower-income families, often pushing them below the poverty line due to long-term treatment expenses.

Dhulikhel Hospital is a non-profit, non-governmental organization situated in Dhulikhel, Kavrepalanchowk District, Nepal. It acts as a primary healthcare provider for the local community and beyond, including through its network of outreach centers.

The Department of Internal Medicine at Dhulikhel Hospital, which manages nephrology services, was established when the hospital commenced its clinical operations in 1996. At present, the hospital has 10 dialysis machines, of which only 3 are operational, while the others are outdated and in poor condition.

Given the influx of kidney patients, Dhulikhel Hospital requires approximately 10-20 dialysis machines; however, having 10 machines should suffice for the next few years.

Problem Statement

- **Limited Access:** Rural patients must travel long distances to reach dialysis centers, often requiring relocation to cities.
- **Inadequate Facilities:** Government hospitals offering free dialysis are overcrowded, leading to long waiting times and insufficient treatment slots.
- **High Financial Burden:** While dialysis sessions are subsidized, related costs such as medicine, laboratory tests, and transportation are unaffordable for many families.
- **Health Risks:** Lack of timely dialysis results in increased morbidity and mortality.

Rationale for the Project

1. **Life-Saving Intervention:** Dialysis is essential for ESRD patients. Installing additional dialysis machines will save lives by ensuring timely treatment.
2. **Equity in Healthcare:** Expanding dialysis services beyond urban centers promotes **health equity**, giving rural and low-income patients fair access to treatment.
3. **Reducing Financial Burden:** By decentralizing services, patients can receive dialysis closer to home, reducing indirect costs of travel and accommodation.
4. **Improving Quality of Life:** Regular and accessible dialysis helps patients live longer, healthier, and more productive lives, reducing family and societal burden.
5. **Strengthening the Health System:** Investing in dialysis infrastructure contributes to long-term health system resilience in addressing non-communicable diseases.

Objectives of the Dialysis Machine Project in Nepal

General Objective

- To strengthen kidney care services in Nepal by increasing access to affordable, timely, and quality dialysis treatment for patients suffering from chronic kidney disease (CKD).

Specific Objectives

- Expand Access to Dialysis Services**
 - Install and operate dialysis machines in Dhulikhel Hospital to reduce dependency on urban centers.
- Reduce Patient Mortality and Morbidity**
 - Provide timely and regular dialysis to patients with End-Stage Renal Disease (ESRD) to improve survival rates and health outcomes.
- Lower the Financial Burden on Patients and Families**
 - Minimize indirect costs such as transportation, accommodation, and frequent hospital visits by decentralizing dialysis services.
- Enhance Quality of Life of Kidney Patients**
 - Ensure that patients can live longer, healthier, and more productive lives through reliable dialysis treatment.
- Build Capacity of Health Facilities**
 - Train healthcare workers in dialysis operation and maintenance, strengthening hospital infrastructure for kidney care services.
- Promote Awareness and Prevention**
 - Conduct awareness campaigns on kidney health, risk factors, and early screening to reduce future cases requiring dialysis.

Budget

Sn	Particular	Qty	Rate (NPR)	Amount (NPR)
1	Fresenius 40085 Dialysis Machine	10	18,00,000	180,00,000
2	Training for operation of Dialysis Machine	10	15,000	150,000
3	Transportation with Insurance of Dialysis Machine	1	150,000	150,000
4	Contingency Cost		500,000	500,000
Total In NPR				18,800,000
Total In USD			1 USD=NPR.140	134,286