

## Capacity Building

### Pediatric Critical Care Fellowship Program at Patan Academy of Health Sciences

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#### ORGANIZATION MISSION STATEMENT

Patan Academy of Health Sciences (PAHS) is dedicated to the sustained improvement of the health of the people in Nepal, especially those who are poor and living in rural areas, through innovation, equity, excellence in love and education, service, and research.

##### *Population served*

PAHS is a public not-for-profit tertiary academic institution dedicated to improving Nepal's rural health by training health workers for rural Nepal.

PAHS is located in the city of Patan, Nepal, which is adjacent to the capital city of Kathmandu. PAHS is based at Patan Hospital, which is the major teaching hospital for the academy. Patan Hospital is one of the largest hospitals in Nepal. It uses modern equipment and facilities to provide treatment for almost 320 000 outpatients and 20 000 inpatients every year. It caters to patients from all over Nepal and every economic stratum. Patan Hospital staff conduct more than 9000 deliveries and 10 000 surgeries annually.

**It is important to understand that even though Patan Hospital serves the underserved and the poor, it mostly does not get any monetary support from the government.**

#### PEDIATRIC CRITICAL CARE MEDICINE (PCCM) FELLOWSHIP PROGRAM

**There are less than ten pediatric critical care specialists in Nepal, for almost 40% of Nepal's total population who are under 18 years of age.** Studies have consistently shown that lack of trained manpower may actually increase the morbidity and mortality within pediatric intensive care (PICU) and high dependency care units (HDU), despite the availability of appropriate technology. Thus, there is an astronomical need for developing this specialty in Nepal. COVID pandemic has further elucidated the urgent need, not just for pediatric critical care facilities, but more so for trained pediatric critical care providers.

##### *Mission Statement*

**The Pediatric Critical Care medicine (PCCM) fellowship program at Patan Academy of Health Sciences (PAHS) is the first such program to train pediatricians in pediatric critical care and address the acute shortage of pediatric intensivist manpower in Nepal.** Considering the fact that the pediatric intensivist may need to provide care to critical newborns in most hospitals outside (and some even within) the capital city, this program has a neonatology concentration.

The Pediatric Intensive Care at Patan Hospital comprises of a high acuity 6 bed critical care unit, and a 6 bed high dependency unit. Fellows also care for pediatric patients in the neurosurgical ICU. They attend to consults on critically ill children in the Emergency department, neonatal units, and the pediatric ward. In addition to children admitted from the Patan Hospital Emergency department, the fellows care for patients that are referred, not just from outside Kathmandu, but also from tertiary centers within the capital city. In order to be able to manage children with congenital heart diseases and major burns, they rotate through Manmohan Cardiac Center and Kirtipur Burn Hospital, respectively.

The fellows at Patan Hospital are considered junior faculty at Patan academy of Health Sciences and receive an equivalent monthly stipend. After completion of the fellowship program, the graduates will acquire and maintain cognitive knowledge, practical skills, and attitudes necessary to provide excellent care for children with the most complex and critical conditions in emergent and intensive care settings to ultimately decrease the morbidity and mortality in PICUs and HDUs in Nepal. They will be encouraged to act as community resource for expertise in their field, and educate future generations of pediatricians.

### **ANMF's role in the development of pediatric critical care medicine in Nepal**

ANMF has been instrumental in establishing this specialty in Nepal.

1. The first well equipped PICU with trained manpower was established in Nepal in 2009 with a \$10,000 training grant from ANMF.
2. Subsequently ANMF members donated funds (\$5000), as targeted donation, to assist in the management of critically ill children from impoverished families saving several little lives.
3. The first pediatric critical care specialist, Dr. Puja Amatya, returned from Kanchi Kamakoti Childs trust Hospital, Chennai, India in 2019 after completing her fellowship that was supported by a \$4784 grant from ANMF  
<https://www.youtube.com/watch?v=b2SW0Cqu9hc>
4. The pediatric Fundamental Critical Care Support course, developed and licensed by the Society of Critical Care Medicine (USA), has been an annual event in Nepal since 2016 to 2019, training over 200 pediatricians from all over the country. ANMF has supported three such course by providing \$1460 per course for licensing and book transport.

### **Project summary (Current proposal for fundraising project)**

**In line with the mission and vision of ANMF, this project aims to train medical professionals to enhance medical care in Nepal.**

Educational support:

1. Portable Ultrasound machine: This is an urgent need for the PCCM fellowship. Bedside ultrasonography (POCUS) is the current standard in ICU medicine and is considered the next vital sign. Therefore, in order to complete the training and be effective intensivist, knowledge and practice in bedside ultrasonography is a must.
2. Books and education materials for the Pediatric department.
3. Pediatric cardiac ICU training and Support for 2 fellows.

**Budget****BUDGET FOR ENTIRE PROPOSED PROJECT PERIOD**

<b>BUDGET CATEGORY TOTALS</b>	<b>COST (IN NEPALI RUPEES)</b>	
	<b>In NUMBERS</b>	<b>In WORDS</b>
EQUIPMENT Samsung Digital Portable Color Doppler Ultrasound Machine with Echo (Model: HM70 EVO) Including 5% Tax and 13% Vats	\$22,000	Twenty-two thousand dollars
Books and subscription to online resources.	\$1500	Fifteen hundred dollars
Support for 2 fellows – cardiac ICU training	\$5000	Five thousand dollars
<b>TOTAL COSTS FOR ENTIRE PROPOSED PROJECT PERIOD</b>	<b>\$28,500</b>	<b>Twenty eight thousand five hundred dollars</b>