

## AbstractID: 14351 Title: International Medical Physicists Symposium

### **Purpose:**

Nepal has a long history of radiological service 1923. Tremendous development has taken place since then. In 1988, Bir Hospital started the first CT and first Nuclear Medicine. In 1991, first Radiotherapy with Tele Cobalt. Newer modalities are being introduced in major hospitals and latest radiological equipments are being imported and small X-ray setups are being established on a day-by-day basis. This quantitative increment may have a positive impact on the health service system of the country; however, the quality of service being delivered cannot be overlooked, especially if the subject relates to radiation.

At present there are 4 Tele-Cobalt, 3 Linear Accelerators, 3 Simulators, 3 HDR Brachytherapy, one Orthovoltage, 1 Gamma Camera (SPECT) and another under installation, 10 MRI machine, more than 30 CT and about 900 X-ray machines in the country. There are about 300 qualified professionals working in this field. With all the above-mentioned background the field of Radiology, Radiotherapy and Nuclear Medicine has become much diversified in Nepal. There are two University hospitals which run MD courses in Radiology & Radiotherapy. We still don't have a legislative body or radiation act to set standards of radiation protection, radiological activities as well as any monitoring system or official records of the exact number of the radiological facilities in operation. Consequently over 90% of workers have never been monitored for their radiation exposure except some hospitals.

As per the report "Reviewing country and Regional Programmes RAS/0/057" from the IAEA fact-finding and programming mission to Nepal, Nepal should have at least 25 qualified Medical Physicist at present. At present, there are only seven Medical Physicists working in four radiotherapy and one in radiology. Till now there is no Medical Physics Program in Nepal. Almost all Medical Physicists working in Nepal had completed M.Sc. (physics) and then trained in different institution. Till now, there are no criteria to become a Medical Physicist in Nepal. Some M.Sc. students from Tribhuvan University are doing their thesis in Medical Physics. In 2009, Nepalese Association of Medical Physicist (NAMP) was established with all Medical Physicists, working in Nepal. The formation of International Board is more essential for the physicists who are working in this underdeveloped country.

### **Method and Materials:**

1. By strengthen academic program for Medical Physicist
2. Train the trainer and on job training.
3. By providing better facilities to stop brain drain and to stay in this profession longer.
4. By establishing Medical Physicist certification board.
5. Recognition of role and responsibilities of the Medical Physicist.
6. Guidelines and standard should be same in all countries

### **Results:**

The number of Medical Physicist working in radiotherapy compared to the numbers per million inhabitants is only 0.21. Becoming a charter member of the International Medical Physics Certification Board will benefit in more ways than one from an underdeveloped country like Nepal.

### **Conclusion:**

The need for Medical Physicist education system and certification board is a must for Nepal. So are the rules, guidelines and standard that need to be succinctly formulated.