



Medical Physics Education and Medical Physicists in Bangladesh

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Purpose: The purpose of this study is to discuss the current status and future development of medical physics education, clinical training and professional development for medical physicists in Bangladesh.

Methods: In Bangladesh the first activities of medical physics were started in the Nineties mainly through several international seminars in Dhaka. As a result, a two year M. Sc (2000) and a four year B. Sc course (2005) were started by establishing a full-fledged “Department of Medical Physics and Biomedical Engineering (MPBME)” at Gono University, Dhaka in 2000. This is the only university of its kind in Bangladesh. The syllabuses of these courses are based on the documents of DGMP, AAPM and IAEA that covers all important aspects of medical physics according to the need of Bangladesh. The main concern of this department is to educate radiation oncology physicists and imaging physicists in the country. Recently the University of Dhaka opened a Department of Biomedical Physics and Technology, offering a Ph. D course in biomedical engineering.

Results: Presently there are 75 students in the MPBME of Gono University. A good number of students have already passed with a M. Sc degree; eight students have even been awarded the B. Sc degree. Under a joint collaboration with the Heidelberg University, 19 students and 5 teachers from the department have already done their scientific work in Germany. According to WHO, at least 600 medical physicists in radiation oncology and 300 radiotherapy centers are needed for the 150 million people of Bangladesh. But at present Bangladesh possesses only 18 radiotherapy centers, 10 linear accelerators, 12 Cobalt-60 teletherapy units, 6 CT-Simulators, 4 Brachytherapy units and one PET machine. The total number of medical physicists working presently in Bangladesh is about 22. Therefore a new society called “Bangladesh Medical Physics Society” (BMPS) was formed in 2009 for promoting medical physics education and training. Recently an international conference on radiation oncology physics and imaging was jointly organized by MPBME and BMPS in cooperation with the “Bangladesh Society of Radiation Oncologists” (BSRO) where 200 participants including 36 foreign guests from 10 different countries were present. To develop a Qualified Medical Physicist (QMP), an urgent crash program has already been started for clinical training in radiotherapy and imaging physics with the collaboration of Germany.

Conclusion: To meet up the future requirement of medical physicists in Bangladesh, the other universities should come forward by establishing departments of Medical Physics and offering education on this subject.