

Strengthening medical physics through education and clinical training programmes in ARASIA States Parties

The challenge...

Medical physics support for the healthcare sector is limited by the insufficient number of clinically qualified medical physicists in the States Parties of ARASIA (Co-operative Agreement for Arab States in Asia for Research, Development and Training related to Nuclear Science and Technology). In the area of cancer treatment, the introduction of advanced new technology in radiotherapy facilities calls for increased dependence on medical physics services. Additionally, the establishment of new hybrid imaging modalities in nuclear medicine and radiology has expanded the field of medical physics.

Challenges include the lack of postgraduate programmes in medical physics and clinical training, as well as insufficient professional recognition of medical physics, which makes the retention of well-trained staff very difficult.

The project...

This IAEA technical cooperation project, built on a previous project, addressed the shortage of clinical medical physicists in the ARASIA States Parties by supporting the development of human resource capacity. The project focused on many aspects of capacity building in medical physics, including academic education, and the establishment of supervised, structured clinical training programmes in radiation oncology medical physics, and the development of much needed documents and training material to support these efforts. Support was provided through expertise, fellowships, training courses and an exchange of information.

The impact...

Patient diagnosis and cancer treatment have been improved in ARASIA States Parties through:

- The establishment of an MSc programme in medical physics at the University of Jordan. A total of 16 students were fully supported by the project, with 11 having already received their MSc.
- The development of a training document for structured, competency based and supervised clinical training in radiation oncology physics.
- The establishment of the Regional Pilot Residency Programme in radiation oncology medical physics at the King Faisal Specialized Hospital & Research Centre (KFSH&RC) in Saudi Arabia.
- Improved competency of clinical medical physicists through education and clinical training.
- The contribution to patient safety and the quality of treatment in the region.



Training of medical physicists at King Hussein Cancer Center, Jordan.

Medical physicists performing a practical exam at the KFSH&RC, Saudi Arabia.



Training of medical physicists at American University of Beirut Hospital, Lebanon.