



## ‘Distance assisted training’ strengthens Regional skills in nuclear medicine

A project of the Regional Cooperative Agreement for Research, Development and Training in Nuclear Science and Technology in Asia and the Pacific (RCA)

A groundbreaking training programme is set to vastly improve the skills and expertise of nuclear medicine technologists (NMTs) throughout Asia and the Pacific and even to transform their status and recognition within the medical community. The unique 'distance assisted training' (DAT) programme, developed under the auspices of the RCA, is cost effective, highly adaptable to diverse teaching and learning environments, and designed to support sustainable in-country distance education practices. The programme was officially released in late 2005 and has been commended internationally as a seminal achievement upon which other training materials for developing countries should be modelled.

The increasing sophistication of nuclear medicine demands increasingly high levels of knowledge and technical expertise from NMTs. In 1994 it was estimated that some 3,000 technologists in Asia and the Pacific had received inadequate training. Since then there has been considerable new investment in the technology and a corresponding increase in the number of technologists, yet many of them continue to struggle even with the basic concepts. To address this shortfall in expertise, the RCA initiated a project to develop a comprehensive new training programme. The project has been substantially funded by the Australian Government, coordinated at Westmead Hospital in Sydney, and implemented by the International Atomic Energy Agency (the Agency). A second objective of the project, since many NMTs' qualifications are not recognised internationally, was to provide technologists with a more sustainable career path by offering them a fully accredited course. There are now some 7,000 NMTs in the region, and it is estimated that 5,000 could benefit from this project.



Students in China demonstrate their practical skills during a workshop. Student assessment is based on assignments, final examinations, and on-site demonstration of skills.

During pilot studies, some 250 students from Bangladesh, China, India, Korea, Malaysia, Pakistan, Philippines, Sri Lanka and Thailand completed the basic stage of the programme, and 130 also completed the advanced topics. Each student received a special record of achievement from Westmead Hospital.

From an initial pilot scheme of only a few subjects, the DAT programme evolved over years of careful development and rigorous international review into a comprehensive syllabus of 25 subjects at basic and advanced levels. The complete programme now runs for 600 hours (six hours a week over two years for in-service training) and includes workshops and other 'hands on' experiential learning techniques to reinforce students' understanding of theoretical principles and to build their confidence in on-the-job problem solving. By giving technologists a common standard of conceptual knowledge and clinical practice, the programme will enhance the quality and consistency of nuclear medicine services throughout the region.

The unique 'distance assisted training' approach was developed as a solution to two longstanding challenges. Firstly, NMTs in Asia and the Pacific come from diverse cultural backgrounds, speak different languages, have varying levels of education, do not all operate the same medical equipment, and often work in remote areas where there are few opportunities for formal training. Secondly, countries in the region need to be able to deliver the training themselves, integrate it into existing programmes, and develop additional courses in the future. In short, to meet these criteria a new training programme had to be adaptable and sustainable. The DAT approach combines detailed course materials designed along 'distance education' principles, with an adaptable course framework and assessment methods that can be easily integrated into the countries' training infrastructure and development programmes.

To date, the DAT programme has already been made compulsory for NMTs in Thailand and all course materials have been translated into Chinese and Korean. Eleven other RCA Member States have confirmed their intention to implement the programme, pilot studies have been undertaken in Africa and Latin America, and interest has been expressed in introducing the programme into Eastern Europe.

The DAT programme is available to national authorities that accept responsibility for conducting it according to prescribed guidelines. An application form and further information are available from the RCA office, IAEA Vienna, PO Box 100, A1400 Vienna, Austria.

A local assessor in the Philippines evaluates a student's skills in positioning a patient for a clinical study using a gamma camera.

In nuclear medicine the patient is administered a small quantity of a radioactively-labelled compound which permits images to be acquired on a gamma camera. The images depict the functioning of the organ or tissues under investigation. Their uses include bone scans in patients with suspected cancer, studies of blood supply to the heart in patients with chest pain, even studies of the brain in patients with clinically-identified brain disorders.



For Further Information

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Printed in Korea May 2007



Regional Co-operative Agreement

For Research, Development and Training  
Related to Nuclear Science and Technology  
for Asia and the Pacific

RCA Success Story 2007

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