

TRANSCONTINENTAL TRAINING: THE IAEA LAUNCHES ITS DISTANCE ASSISTED TRAINING ONLINE LEARNING PLATFORM — DATOL

At the DATOL event held on the margins of the 58th IAEA General Conference, Member States had the opportunity to learn about this online training programme for nuclear medicine professionals.

(Photo: C. Hofilena/IAEA)



conduct high-quality studies and deliver safe, appropriate medical services.

DATOL's thorough interactive syllabus currently offers 39 subjects, which represent approximately 900 hours of study, and strikes a balance between disciplinary knowledge (theory) and situated knowledge (practice). When pursued part-time, between 5–6 hours per week, the DATOL syllabus can be completed within a 2 to 3 year period.

Recent years have witnessed remarkable developments in the field of nuclear medicine; hybrid imaging techniques, novel analytical methods and computed tomography procedures have been broadly adopted by medical facilities around the world. Similarly, there has been a growing awareness that the safe management and use of radiation in medicine depends on the presence of well-trained medical professionals.

While IAEA Member States have made noteworthy investments in nuclear medicine, gaps in expertise remain, especially in low and middle income countries. In some regions, the nuclear medicine discipline has not yet reached the critical mass necessary to justify targeted training programmes. In other regions, the available training programmes do not satisfy the evolving requirements of the field.

In September 2014, the Agency officially launched the Distance Assisted Training Online (DATOL) platform. The platform is available through the Human Health Campus — an IAEA-developed resource for health professionals to find organized and dependable professional educational materials — in order to address these skill gaps.

DATOL will act as an information resource and offer structured access to formative learning. This professional online training platform is intended to develop the knowledge and skills necessary for nuclear medicine professionals to

In order to ensure that the correct skills are cultivated by participants, the distance assisted training platform employs assessment procedures which are standardized on both a regional and interregional level. Each of the nearly 40 subjects includes a set of exercises for which results are recorded to verify course completion.

The Origins of DATOL

Distance assisted training in this field began as a paper-based introduction to nuclear medicine technology.

The origins of DATOL can be traced to a programme introduced by the University of Sydney and the Australian Nuclear Science and Technology Organisation (ANSTO) over 20 years ago. Together they engineered distance assisted training (DAT) where hospitals in IAEA Member States were given an introduction on how to use nuclear medicine in diagnosis and treatment. Following its successful outreach efforts, the DAT was transformed and upgraded into a CD e-learning module, which in turn was followed by the current online version — DATOL.

Today, DATOL is a harmonized, web-based distance learning programme suited for personal study, continuous professional development and formal vocational training for nuclear medicine professionals. The platform offers comprehensive online training

resources, which cover fundamental concepts and practical applications. Particular attention is paid to recent developments in emission tomography techniques, including single photon emission computed tomography and positron emission tomography. Although DATOL participants already practice nuclear medicine — a requirement for the programme — they nonetheless benefit from the interactive training tools, visual demonstrations and student support capabilities, which serve to enhance their understanding of the field.

In the medical field, nuclear and radiation techniques are commonly deployed to address a large number of maladies, from infectious disorders to non-communicable diseases such as cancer and cardiovascular disease. Thus far, DATOL has been used to train approximately 800 students in the detection and treatment of these illnesses, most notably in the Latin America, and Asia and the Pacific regions.

Positive Feedback

Despite the fact that DATOL was launched only recently, feedback has already been gathered regarding the helpfulness of this kind of distance assisted training platform. Especially where the recommended implementation guidelines (which include timetables and strict deadlines) are followed, DATOL has demonstrably improved nuclear medicine practices. During interactive workshops organized in support of DATOL, the IAEA gathered feedback that uncovered notable gains in knowledge, positive changes in attitudes and the adoption of critical new practices. The availability of the nuclear medicine syllabus in Spanish has significantly contributed to the success of the outreach efforts in promoting this innovative online service in Latin America.

The launch of the DATOL platform marks a unique and key milestone in the culmination of substantive efforts and planning, supported through a series of technical cooperation (TC) projects, which have been implemented over the past two decades. The objectives of the TC projects were to progressively develop and harmonize the training syllabus and course material; improve the delivery mechanisms of the online training package; and tailor the course to suit professional development programmes for all nuclear medicine specialists. The learning experience in the online courses of the Human Health Campus is powered by the IAEA's Cyber Learning Platform

for Nuclear Education and Training (CLP4NET) — a one window operation with open access to a field of science that provides not only specific modules of information but training as well.

DATOL is also a result of an effective partnership between IAEA Member States, the IAEA Department of Nuclear Sciences and Applications and the IAEA Department of Technical Cooperation, with support from the University of Sydney, University College London and ANSTO.

Soon after its launch at the margins of the 58th IAEA General Conference, a number of queries were received from Member States regarding this online programme. The Islamic Republic of Mauritania and Benin have recently requested additional details to acquire a better understanding of DATOL.

Supporting the IAEA's Mandate

With regard to human health, the technical and infrastructure needs associated with prevention, diagnosis and treatment are often complex and expensive. The IAEA works to facilitate the efforts of Member States in delivering nuclear medicine services, as mandated by Article II of the IAEA Statute, which states that the IAEA shall accelerate and enlarge the contribution of atomic energy to health. Thus developing appropriate training programmes for the broader nuclear medical community is one of the core goals of the IAEA.

DATOL is an expression of that mandate, and will provide accurate, authoritative information with which to train and develop the skills of nuclear medicine professionals from among the IAEA's Member States.

DATOL has provided a learning platform for those countries that need support in first hand medical information and training that can help save lives. It promotes capacity building for nuclear medical professionals in a proactive way that is also cost effective. It enables those in the field of work and education a remarkable opportunity to learn about new concepts and available technologies in the nuclear medical sector.

Omar Yusuf, IAEA Department of Technical Cooperation