IAEA

AFRA

Radiopharmacy and nuclear medicine

The challenge…

One of the key challenges facing the health sector in Africa, and nuclear medicine in particular, is the shortage of human resources, especially radiopharmacists. In most IAEA Member States in Africa, there is limited availability of specialized training in radiopharmacy, resulting in the absence of nationally registered pharmacists with radiopharmacy experience. Most AFRA States Parties operate their nuclear medicine facilities in hot laboratories (laboratories specially designed for working with radioactive substances). Surveys have shown the poor operating state of these hot laboratories and also that many of the staff have received limited or no training on hot laboratory practices. Training radiopharmacists would improve basic quality systems in hot laboratories and as well as standards of performance of staff working in nuclear medicine in these laboratories. Trained and specialized radiopharmacists are essential for achieving high standards and growth in nuclear medicine. Radiopharmacists provide a specialized, expert input for the production of radioactive pharmaceuticals, including compounding and quality assessment and management, as well as for research and invention of new products. Quality management systems and quality control in nuclear medicine are vital for excellence in nuclear medicine practice.

The project…

The AFRA project supported the assessment of safety, clinical and managerial practices in nuclear medicine centres, with the aim of identifying deficiencies and weaknesses, and recommending practical technical and managerial changes. The project is specially aimed at improving the number of competent staff in hot laboratories.

Nuclear medicine uses very small amounts of radioactive materials (radiopharmaceuticals) to diagnose and treat diseases. In imaging, the radiopharmaceuticals are detected by special cameras that work with computers to provide very precise pictures of the area of the body being imaged. In treatment, the radiopharmaceuticals go directly to the organ being treated.

The impact…

Over the last five years, the project had positive results in many African countries. The status of nuclear medicine has significantly improved in some countries. Moreover, five countries have established their first nuclear medicine centres/projects namely, Benin, Burkina Faso, Mali, Mauritania and Senegal. Some nuclear medicine units in Africa have benefited from the results of audit programmes to strengthen their activities, with appreciable positive outcomes in the area of clinical care, radiation protection, infrastructure and new equipment. Furthermore, a new regional designated centre (RDC) in nuclear medicine has already been identified in Algeria with the possibility of more RDCs being designated in the future.

Technical cooperation project RAF/2/008: Strengthening and Expanding Radiopharmacy Services in Africa