

Knowledge Management for Sustainable Applications Of Nuclear Techniques in Ethiopia: Case Study

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Ethiopia is benefiting from applications of nuclear related technologies in agriculture, livestock, water and energy resource assessment, etc. Nuclear techniques are playing a major role in the health sector in terms of diagnosis and therapeutic applications. Cancer is a major cause of death in industrialized countries, and the number of cases in developing countries like Ethiopia is also growing rapidly. Ethiopia according to WHO estimates had over 52,000 patients newly diagnosed with cancer in the year 2000. In the year 2015, this number is projected to increase to over 83,000.

The International Atomic Energy Agency (IAEA), through its technical cooperation program supported the establishment of Radiation Therapy Centre at the premises of Black Lion Hospital. The Centre started work in 1977 with one medical Physicist, three therapy radiographers, and one radiation oncologist. Currently the Radiotherapy Centre is facing a number of constraints among which shortage of trained staff is the major one. The Centre has a capacity to give inpatient services for 20 patients. However, it is giving only outpatient service (limited to 700 patients per annum) due to shortage of trained manpower in the field. Moreover, brachytherapy, the treatment planning, and the mould room equipment are not utilized at all, while the teletherapy and other equipment are under utilised. Cancer patients awaiting treatment services are increasing from time to time (40,000 – 50,000). Occurrence of death due to lack of access to medication is therefore becoming high. Noting this, the Agency provided fellowships and training courses on applications of nuclear techniques for diagnostic and therapeutic purposes in the treatment of cancer to limited staff members of the Radiotherapy Centre.

In spite of the effort made by the Agency to train personnel in therapeutic applications of nuclear techniques, the number of trained staff remains low. This in turn affects the sustainable application of nuclear techniques in tertiary health care services, which currently is manifested by decline of the number of cancer patients accepted for treatment at the Centre.

The Agency is providing support in human resources development in order to build national capacity required for the applications of nuclear techniques. However, sustainable applications of nuclear techniques require effective knowledge management, which triggers in-house training of personnel. Currently, little effort is being made by trained staff members of the Radiotherapy center to share the knowledge they acquired through the limited Agency supported fellowship/trainings. Moreover, efforts made at the center towards preserving and sharing knowledge are minimal.

The paper therefore attempts to i) indicate the importance of systematic intervention in the area of knowledge management for upgrading the services given by the Centre and ,

ii) Point out the initiatives that should be taken in order to sustain applications of nuclear techniques at the Centre and other beneficiary institutions in the country.