



# **SUSTAINABILITY AS A CHALLENGE TO RADIOTHERAPY IN NIGERIA**

By

Professor. S. B. Elegba

Director-General/CEO

**NIGERIAN NUCLEAR REGULATORY AUTHORITY**

Session 3 of the Scientific Forum  
49<sup>th</sup> General Conference of the IAEA, Vienna, Austria  
28<sup>th</sup> September 2005



# THE NIGERIAN SITUATION

2002 to 2003- Radiation Protection Audit in  
Radiotherapy Centres

- **5 Radiotherapy centres for a population of 140 million, i.e. 1 machine to 28 million**
- **About 100,000 new cases are diagnosed/yr**
- **Cancer register not updated since 1999**
- **Services are poor and serve poor patients**
- **Affluent patients seek treatment abroad**



# LEGISLATIVE AND REGULATORY INFRASTRUCTURE

- ✓ **The Medical and Dental Practitioners Act  
Cap 2221 of 1990 amended by Decree 78  
of 1992.**
- ✓ **Radiographers Registration Board of  
Nigeria Decree 1987.**
- ✓ **Nuclear Safety and Radiation Protection  
Act 1995**
- ✓ **Nigerian Nuclear Regulatory Authority  
2001**
- ✓ **Nigerian Basic Ionizing Radiation  
Regulations 2003**
- ✓ **Guidance on Radiation Protection In**



# RADIATION PROTECTION AUDIT REPORT OF RADIOTHERAPY PRACTICE

- ✓ Personnel
- ✓ Equipment and Machines
- ✓ Premises
- ✓ Procedure
- ✓ Management



# Personnel

- Inadequate number of cadres
  - Oncologists/Medical Physicist/Radiographers
- ▼ Inadequate level of competence
- ▼ High patient-to-expert ratio in radiotherapy



# Equipment and Machines

- ▼ Obsolete
- ▼ Second hand, without manuals or parts
- ▼ Poorly maintained
- ▼ Unaccredited maintenance group
- ▼ Lack of accessories as against spare parts



# Premises

- ✓ Location
- ✓ Little or no shielding materials
- ✓ Re-configuration without drawings
- ✓ Lack of records



# Procedure

- ▼ Lack of Operational Manual
- ▼ Lack of Radiation protection programme
- ▼ Lack of Quality Assurance Manual
- ▼ Lack of Radiological Emergency Plan





# Management

- ✓ Lack of structured communication channel between management and the operating unit
- ✓ Lack of programme for equipment maintenance and replacement
- ✓ Lack of financial plan budget for the operation and maintenance of the facilities
- ✓ Lack of commitment from management to radiation protection and safety
- ✓ Inadequate communication between management and facility owners.



# RADIOTHERAPY PARADIGM

- ▼ Availability of Patients - Y
- ▼ Affordability of Service - Y?
- ▼ Consumer Satisfaction - N
- ▼ Sustainability of Practice - N



# Issue of Sustainability



# Issue of Sustainability

*Meeting the needs of the present generation without compromising the needs of future generations*



# Issue of Sustainability

*Meeting the needs of the present generation without compromising the needs of future generations*

*The triple bottom line: economic, social, environmental*



# Issue of Sustainability

*Meeting the needs of the present generation without compromising the needs of future generations*

*The triple bottom line: economic, social, environmental*

- National Policy of Integrating Radiotherapy into the National Cancer Control Programme in 2005
- International Conference on Radiation Safety in Cancer diagnosis and Therapy, 11-14 April 2006