



The role of MPE/QE/RPO in Hospitals - the African Perspective

By

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Introduction

- FAMPO is the “Federation of African Medical Physics Organisations
- Established on 7th October 2008 with the aims and purposes of promoting;
- Improved quality service to patients and the community in the Africa.
- The co-operation and communication between Medical Physics Organisations in Africa and where such Organisations do not exist between Individual Medical Physicists.
- The profession and practice of medical physics and related activities in Africa.
- The advancement in status and standard of practice of the medical physics profession.

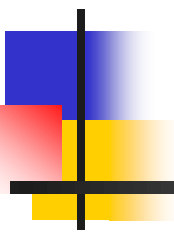
Introduction cont.....



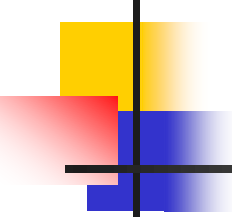
, and improving the training of Medical Physicists.

- research and developing in the field of Medical physics.
- appropriate use of technology to the benefit of rural populations.
- organizing and/or sponsor international conferences, regional and other meetings or courses
- collaborating or affiliate with other Scientific Organisations
- It is a non profit making organisation.

Executive members of FAMPO

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- ❖ Dr. Ahmed Ibn Seddik of Morocco is the president.
 - ❖ Ms. Rebecca Nakatudde of Uganda is the Vice President,
 - ❖ Dr. Khaled ElShahat of Egypt is the Treasurer.
 - ❖ Dr. Taofeeq A Ige of Nigeria is the Secretary -General.

Current status of FAMPO

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- About 48 individual medical physicists in Africa have registered.
 - In addition GAMP, NAMP, SAAMPS, SAMP and MPST of Ghana, Nigeria, South Africa and Tanzania have also expressed interest.
 - The IOMP council approved FAMPO's application as the new regional youngest organisation of IOMP.
 - FAMPO has a logo and a website on <http://www.federation-fampo.org>
 - Submission of FAMPO's letter head to the IOMP will be done during the deliberations in Beijing.
 - FAMPO is sponsoring AFRIRPA 04 to be held in 2014 in Morocco.

Objectives of the study



- Training gaps of MPE/QE/ RPO in radiation protection and safety
- Countries with recognised professional bodies governing medical physicists and other radiation protection personnels
- Current situational analysis of the communication links among Medical Physicists, facility manager and Regulators during management of radiation protection aspects in Medical Practices.
- Level of involvement of medical physicists, regulators and hospital managers in safety of Medical Practices.
- Challenges faced by Medical Physicists and regulators when conducting their work in medical practices .

Methods and materials



- The study was conducted with 11 medical Physicists during AFROG conference held from 20th -24th February, 2012 in Kampala, Uganda
- Eleven countries ie Morocco, Egypt, Kenya, Zimbabwe, Ghana, South Africa, Uganda, Zambia, Cameroon, Tunisia and Mauritius
- 25 regulators/RPOs of 15 countries during (AFRA) Training course for trainers in the use of ICT teaching materials in radiation protection held between 20th -24th February, 2012 in Gaborone Botswana
- participating countries included; Tanzania, Morocco, Ghana, Niger, Kenya, Botswana, Mali, Nigeria, Egypt, Zambia, South Africa, Sierra Leone, Mauritius, DR. Congo and Uganda.
- A questionnaire was used to collect data inline with the objectives.

Results and discussions

1. Training gaps of MPE/QE/ RPO in radiation protection and safety in IAEA African member states.

1.1 Qualification of Medical Physicists and Regulators in IAEA African member states

Figure 1: Qualification of medical physicists in Africa

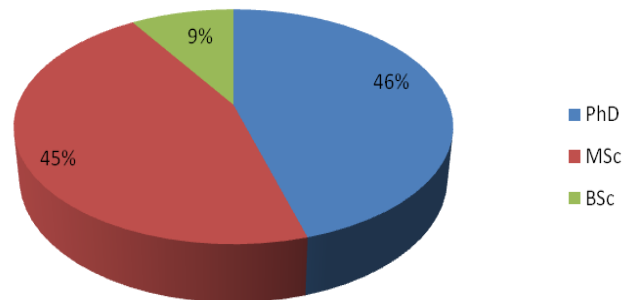
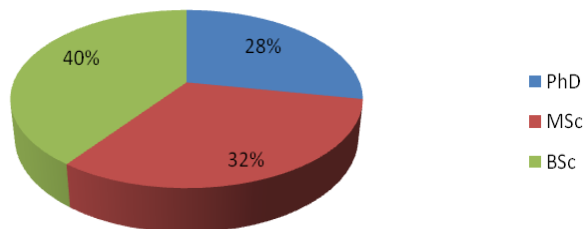


Figure 2: Qualification of RPO's in Regulatory bodies in Africa



➤ There is a big divergence among the highly and least qualified Medical physicists in Africa

➤ Uniform distribution of carders at all levels of qualification for RPOs which is not reflected in the MP Field.

➤ However, the diversion of the employed RPO's in different subject matter has presented a problem especially when inspecting Radiotherapy Medical Practices due to lack of training and expertise.

1.2 Working experience of Medical Physicists and Regulators in IAEA African member states

Figure 3: Working experience of MP in Africa

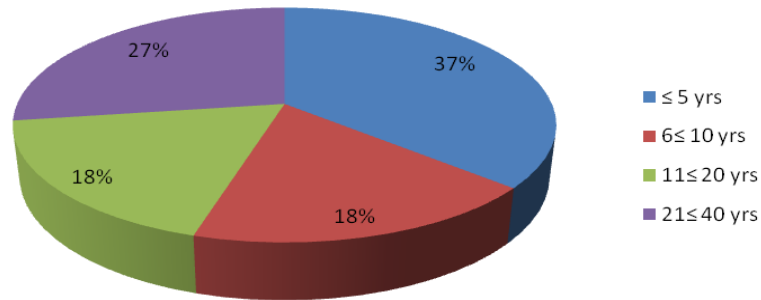
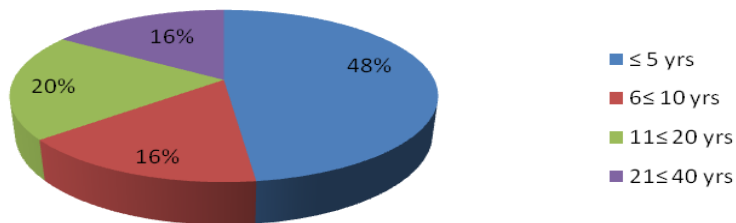


Figure 4: Working experience of RPOs in Regulatory bodies in Africa



❖ Continuity is possible in RPO field as compared to MP.

❖ Continuous training to achieve a uniform distribution of all cadres is a key issue for FAMPO and all stakeholders.

❖ FAMPO has established that training of MP is very expensive and very few training centres in Africa exist.

❖ Identification of the long experienced and highly qualified to help in local training

1.3 Centres of training of Medical Physicists and Regulators in IAEA African member states

Figure 5: Location of Training centres of MP

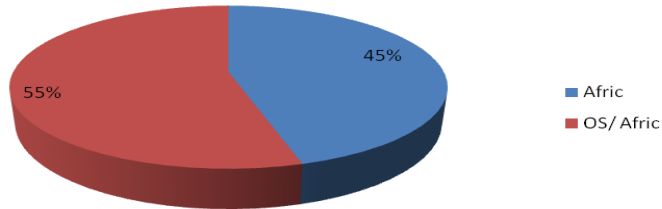
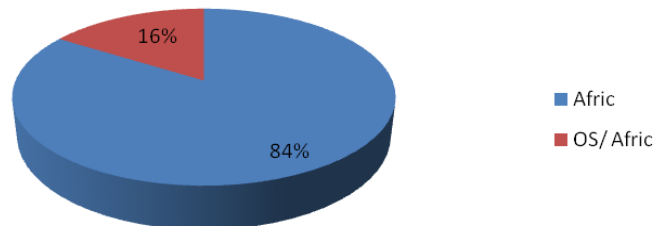


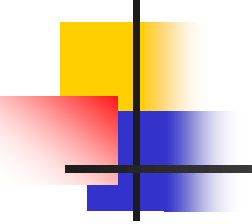
Figure 6: Location of Training centres of RPO



❖ With support of the IOMP, IAEA, WHO, machine vendors, local governments, identification of a training centres for MP in East and West Africa is key to FAMPO's activities and work plan.

❖ . Employing personnel with MP background in the regulatory authority can be a quick solution

❖ Review of training curricula for RPOs



2.0 Countries with recognised professional bodies governing medical physicists and other radiation protection personnels in IAEA African member states.

2.1 Existence of Law regulating use of ionising radiation in IAEA African member states

- All the 11 participating medical Physicists and 25 regulators indicated that they have approved Laws and bodies governing the use of radiation in their respective countries

2.2 Recognised professional bodies governing and registering medical physicists in African countries

Figure 7: Showing Africa countries with recognised professional body governing medical physicists

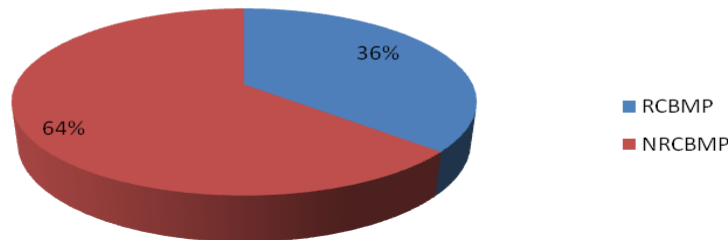
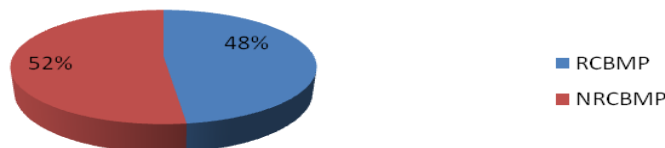


Figure 8: Showing Africa countries with recognised professional body governing medical physicists from the RPO's perspective



❖ The figures indicated are comparable

❖. Non recognition has presents a challenge of ineffective communication among individual physicists and related fields.

❖ This has also led to non-representation on hospital and government boards

❖ led to minimal financial support to the field of MP.

2.3 Communication links among Medical Physicists, facility manager and Regulators during management of radiation protection aspects in Medical Practices. countries

Figure 9: Collaboration between Medical Physicists and Regulators in management of safety in Medical Practices, the MP perspective

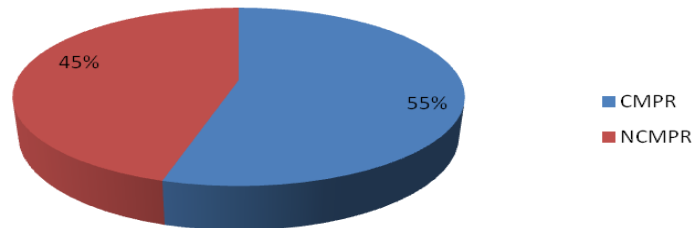
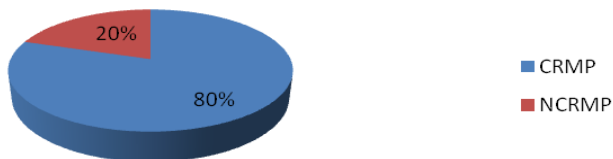


Figure 10: Collaboration between Regulators and Medical Physicists in management of safety in Medical Practices- the RPO perspective

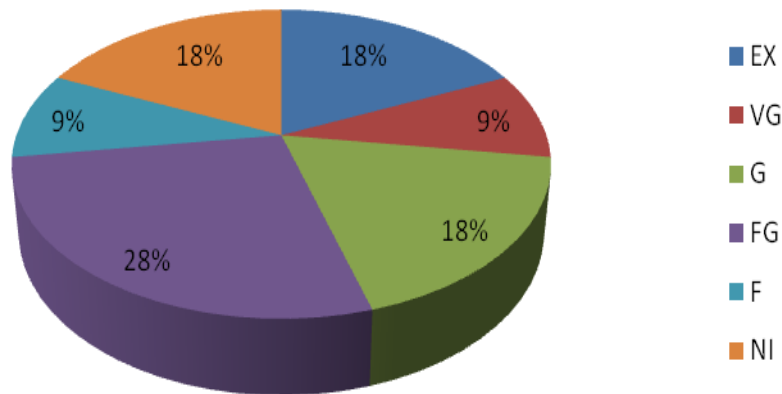


- ❖ Among the areas of collaboration include; consultancy, conference participation and individual dosimetry
- ❖ the 45% that work in isolation pose a challenge on how safety issues are managed
- ❖ countries with no MP face a challenge when inspecting Radiotherapy centres.
- ❖ Some countries use the same RPO as QE and MPE.
- ❖ There is also a mix of duties and roles among MP and RPO.

2.3 Communication links among Medical Physicists, facility manager and Regulators during management of radiation protection aspects in Medical Practices.

2.3.1 involvement of MP in handling radiation protection in medical Practices

Figure 11: Level of involvement of Medical Physicists in Radiation Protection in Medical Practices in African Countries

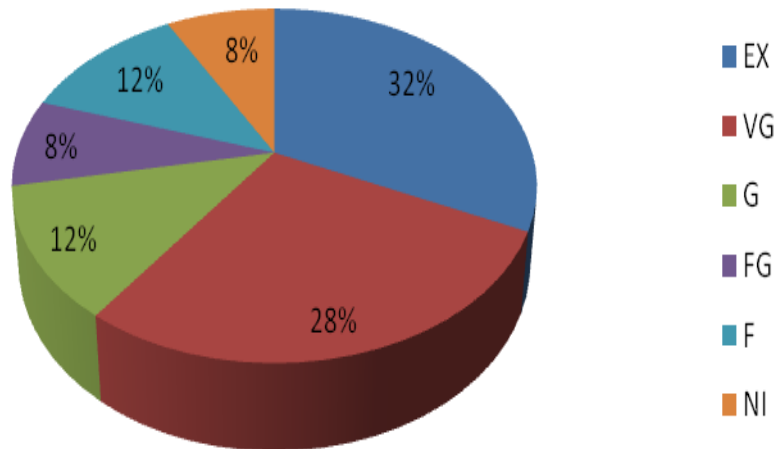


❖ non uniform level of involvement of MP in handling radiation protection in medical Practices.

❖ FAMPO to investigate the factors.

2.3.2 Involvement of Regulatory body in sensitizing the hospital managers and users on safety of radiation in Medical Practices

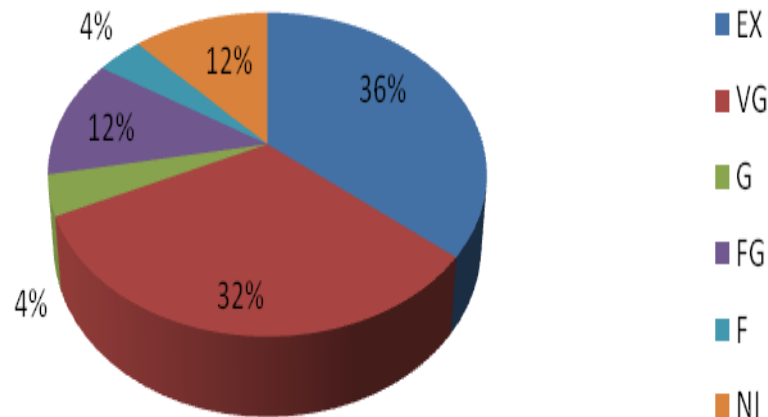
Figure12: Involvement of Regulatory body in sensitizing the hospital managers and users on safety of radiation in Medical Practices



❖ For the Law to be strong, effectiveness of the regulatory bodies should be felt by all radiation users in every country.

2.3.3 Awareness by the hospital managers of the work of the regulatory bodies in medical practices

Figure13: awareness by the hospital managers about the work of the regulatory body in medical practices



❖ Through sensitizing workshops organized by the regulatory bodies to create awareness and have a vote for support in terms of operational funds, training and employment of MP and RPOs.



3.0 Challenges faced by Medical Physicists and regulators when conducting their work in medical practices in IAEA African member states

- Un timely release of funds from the government for the regulatory bodies to carry out their work.
- In adequate number of medical Physicists in the country.
- Most regulators/ RPOs play the roles of the Medical physicists.
- Lack of commitment to radiation safety by some hospital managers in some hospital or clinics
- Confusion on the roles and responsibilities of the Regulators and Medical Physicists.



3.0 Challenges faced by Medical Physicists and regulators when conducting their work in medical practices in IAEA African member states cts.....

- Some hospital administrators do not appreciate the need for radiation safety in their settings
- Un justified increase of licence fees brings un cooperation with users
- Inadequate collaboration and communication among regulators, existing MP and hospital managers
- Some countries with no MP employed in the regulatory body, find it very difficult to inspect Radiotherapy centres.
- Some countries do not have any MP existing so no collaboration can be done



3.0 Challenges faced by Medical Physicists and regulators when conducting their work in medical practices in IAEA African member states cts.....

- Un authorised radiology centres
- Some countries share same body for radiation protection and MP.
- Missing data base of sources. So inspection and licensing of all sources is very hard
- MP play the role of RPO in some countries. This presents a big overload.
- Due to limited personnel, time is not enough to carry out safety assessment in some hospitals



3.0 Challenges faced by Medical Physicists and regulators when conducting their work in medical practices in IAEA African member states cts.....

Lack of developed procedure and training of MP and RPOs.

Lack of inadequate commitement to safety culture at policy level, managerial level and individual level.

Some countries have newly recruited MP and regulators.

Some counties have un qualified experts who try to work as MP and regulators. This presents a brain drain

Un willingness to work in remote/rural centres

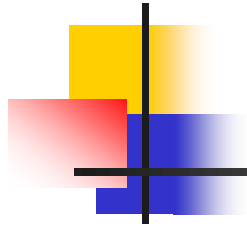
Lack of tools to use and expertise to use them

Conclusion




- The gaps identified in the study should be an indicator for FAMPO to carry out close collaboration through the FAMPO Council representatives, radiation protection associations in Africa, WHO, IRPA, IOMP, machine vendors and policy makers when executing its functions.

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