

# **AAPM/COMP ANNUAL MEETING JULY 2020**

**STATUS OF MEDICAL PHYSICS IN AFRICA - A KENYAN PERSPECTIVE**

**By**

**AGGREY A. WAKHULE**

**MEDICAL PHYSICIST – KENYATTA NATIONAL HOSPITAL**

**AND**

**INTERIM PRESIDENT – KENYA ASSOCIATION OF MEDICAL PHYSICISTS (KAMP)**

# INTRODUCTION

- Medical Physics as a discipline in Africa remains an alien profession even to those in clinical practice especially in oncology, radiology, cardiology and nuclear medicine, where services of a medical physicist are vital.
- The few qualified Medical Physicists professionals in Africa are mostly employed in radiotherapy facilities where there is gradual growing acceptance for the profession. Other areas such as Diagnostic Imaging and Nuclear Medicine remain scarcely managed by Medical Physicists.
- Africa is one of the continents with very low number of MPs per million population

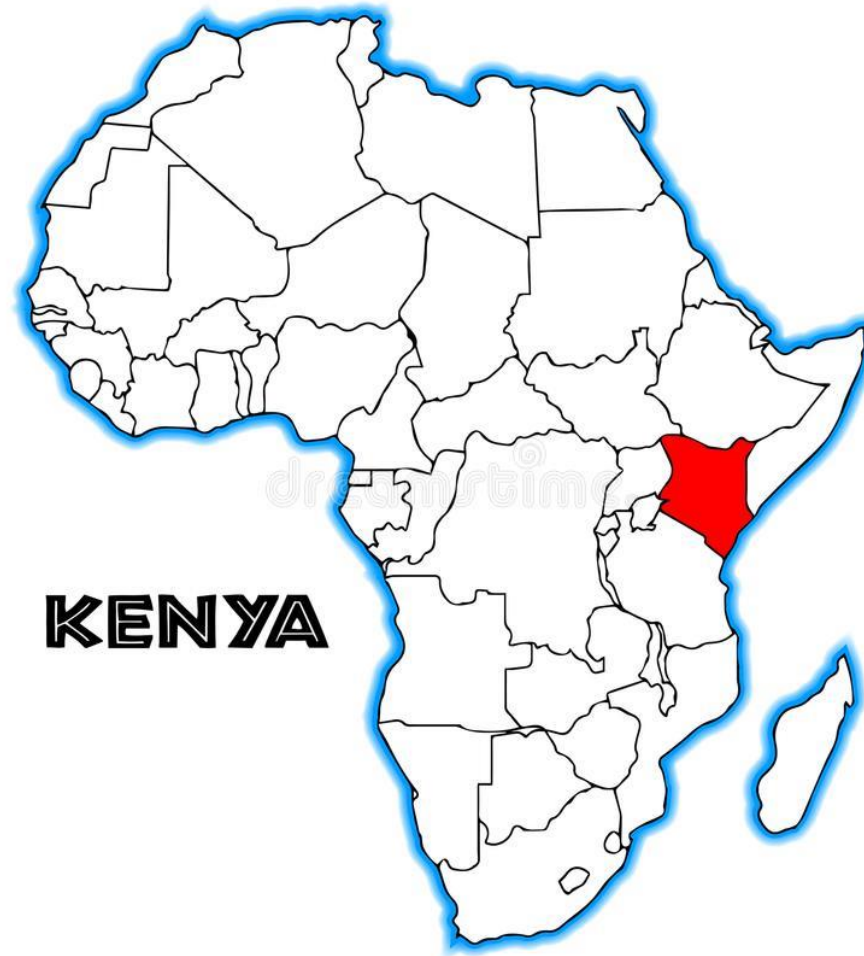
# INTRODUCTION CONT.....

- The perception and the role of a medical physicist in clinical practice remains a mystery to most hospital managers and Ministry of Health. For instance, in Kenya even after its endorsement as a cadre in 2000 upto date, there is no clear Scheme of Service for practicing medical physicists. Further the clinical relevance of Medical Physicists remains a debatable issue in Africa, despite the rampant increase of cancer burden and challenges of its management. The situation is made worse by lack of appropriate infrastructure, state-of-the art equipment with low budgetary support. This has resulted in poor career progression and morality amongst the few Medical Physicists. .

# RADIOTHERAPY FACILITIES IN KENYA

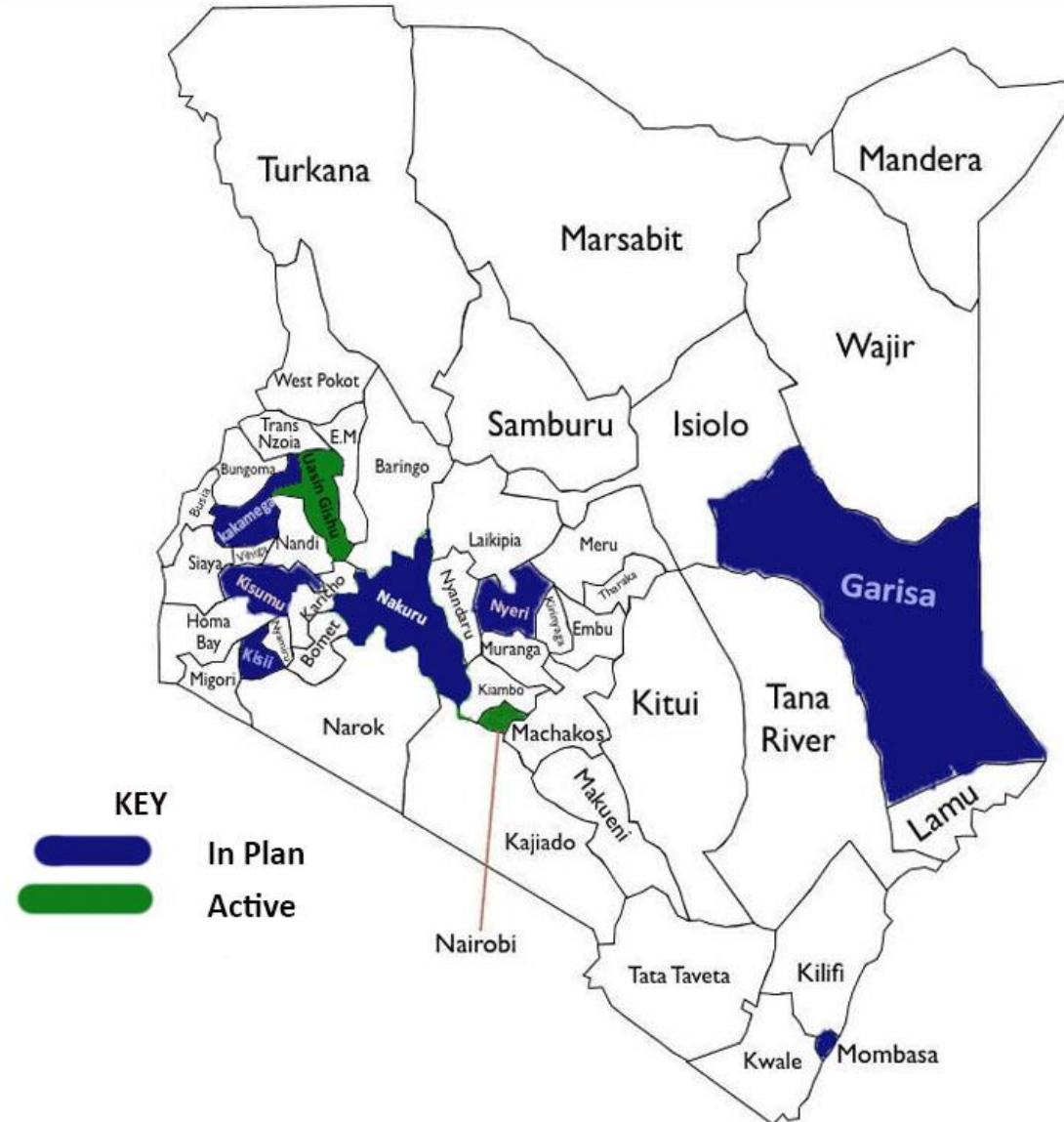
- Kenya has a total number of 8 radiotherapy facilities, 6 of which are in the private sector while 2 are in public.
- A total number of 21 Medical Physicists work in this facilities. Of the 21, 3 are foreigners. Of the remaining 17 Kenyans, only 4 have masters in Medical Physics.
- In a population of 47 million, this translates to 1 Medical Physicist to over 2 million people.
- It is estimated that 48,000 Kenyan are diagnosed with cancer every year of which 80% will require radiotherapy.

# MAP OF AFRICA



**KENYA**

# MAP OF KENYA WITH DISTRIBUTION OF RADIOTHERAPY FACILITIES



# TRAINING OF MEDICAL PHYSICISTS IN AFRICA

- Lack of adequate training institutions for Medical Physicists in Africa at large and Kenya in particular makes the number of qualified Medical Physicists very low in comparison to developed world. Various discussions have been held on the status of Medical Physics in Africa and challenges identified have been on lack of recognition leading to poor pay, inadequate training programs hence the number of qualified Medical Physicists to the general population remains low.

# TRAINING OF MEDICAL PHYSICISTS IN AFRICA CONT...

- Currently there is no formal training of Medical Physicist in Kenya. All the practicing Medical Physicists have trained out of the country with support from IAEA
- There is a IAEA country project, whose objective is to establish an academic program at one of the local universities and a clinical training at one of the public facility with radiotherapy services. However lack of adequately trained and experienced Medical Physicists to mount the program could be a challenge. There is no Ph D holder in the country apart from one who retired and out of practice.



# PROFESSIONAL ASSOCIATIONS

- In an attempt to address the challenges facing Medical Physics profession in Africa, some African Countries have formed professional societies to spearhead awareness programs that are expected to raise recognition of the profession in the region.
- The Federation of African Medical Physics Organizations (FAMPO) was formed to promote the co-operation and communication between medical physics organization in the region, and where such organizations do not exist between individual medical physicists.
- The Kenya Medical Physicists have come up with a professional association that is awaiting registration by the state law office

# CONCLUSION

- The status on Medical Physics in Africa still faces more challenges that need more robust intervention with the support of developed country in terms of training and equipment.
- The Government input towards the development of Medical Physicists still remains low

# REFERENCES

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- Ige T.A et al., 2020, Medical Physics Development in Africa – Status, Education, Challenges, Future, *MEDICAL PHYSICS INTERNATIONAL Journal, Special Issue, History of Medical Physics 3,*