Breaking out of the clinic: Nontraditional medical physics careers:

Medical Physics Careers in International Organizations

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Former staff member
Pan American Health Organization / World Health Organization

What the presentation aims to cover

- Brief outline of my own career path
- Recommendations to become a medical physicist in an international organization
- Needed resources to apply for a position
- Strategies for a successful career
- Comparison of day-to-day duties with those of a clinical medical physicist
- Benefits and drawbacks

Where it all started: Universitat de Barcelona

Fulbright Scholarship – Travel to the USA

Hospital Santa Creu i Sant Pau

1/7/2019
When applying to become a member of an international organization, it is essential to understand its goals and to realize that medical physics activities will have to be programmed within the organization's remit.
International Organizations

- Intergovernmental (Counterparts)
  - IAEA (Atomic / Nuclear Energy Commissions)
  - ILO (Ministries of Labor)
  - WHO (Ministries of Health)
  - Pan American Health Organization (Ministries of Health of the Americas)

- Professional – Medical Physics (Region)
  - IOMP (World)
  - EFOMP (Europe)
  - AFOMP (Asia / Oceania)
  - SEAFOMP (South East Asia)
  - ALFIM (Latin America)
  - FAMPO (Africa)
  - MEFOMP (Middle East)

- Professional – IUPESM (Medical Physics & Biomedical Engineers)
  - HTTG

PAHO was founded in 1902
In 1950 it agreed to also serve as the WHO Regional Office for the Americas
In 2002 PAHO celebrated its 100th Anniversary
The Radiological Health Program was established in 1960. In 2010, it celebrated its 50th anniversary.

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If one really believes that medical physics improves the delivery of health care, to promote medical physics it is essential to analyze first the situation of diagnostic and therapeutic radiology services in the countries served.

LMIC DIAGNOSTIC & THERAPEUTIC RADIOLOGY SERVICES PROBLEM TREE

1. LACK OF FINANCIAL RESOURCES AND INEFFICIENT RESOURCE ALLOCATION
   - Needs at Government Level
   - Needs at Institutional Level
   - Infrastructure Problems
   - Root Causes
   - Bottom Line

LMIC DIAGNOSTIC & THERAPEUTIC RADIOLOGY SERVICES PROBLEM TREE

- Lack of financial resources and inefficient resource allocation
  - Run-down buildings
  - No equipment procurement specifications
  - Inadequate salaries
  - Attitudinal behavior
  - Poor schooling
  - Root causes: institutional level
INADEQUATE FACILITIES
OBSOLETE AND/OR NON-FUNCTIONING EQUIPMENT
MINIMALLY TRAINED PERSONNEL
INEFFECTIVE OPERATIONAL PROCEDURES
UNSAFE RADIATION CONDITIONS
LACK OF FINANCIAL RESOURCES AND INEFFECTIVE RESOURCE ALLOCATION
RUN-DOWN BUILDINGS
NO PROCUREMENT SPECIFICATIONS
INADEQUATE SALARIES
ATTITUDINAL BEHAVIOR
LACK OF FINANCIAL RESOURCES AND INEFFECTIVE RESOURCE ALLOCATION
NEEDS AT GOVERNMENT LEVEL
NEEDS AT INSTITUTIONAL LEVEL
INFRASTRUCTURE PROBLEMS
ROOT CAUSES
BOTTOM LINE
LMIC DIAGNOSTIC & THERAPEUTIC RADIOLOGY SERVICES PROBLEM TREE
13
14
Radioactive Source Disposal
Ra-226
Radioactive Source Disposal
Co-60
Contributing to Publications on Quality and Safety


Promoting Radiation Safety Standards

**BSS**

1994 (Interim)
1996 (Final)

Medical Physics Representatives
AFOMP/PAHO WHO EFOMP IOMP

Vienna 2007 - Technical Committee Meeting

**LMIC Diagnostic & Therapeutic Radiology Services Problem Tree**

- Health Technology Assessment Program (Advisory)
- Development of Policies and Strategies (Normative)
- Radiologic Services Standards (Normative)
- Radiation Safety Legislation/Regulations (Mandatory)

- Comprehensive Plan for Facility Organization and Development
  - Infrastructure Planning
  - Equipment Planning and Management
  - Radiation Safety Standards
  - Working Group Process
  - Safety Assurance Programs

- Safety
  - Infrastructure Planning
  - Equipment Planning and Management
  - Radiation Safety Standards
  - Worrying Group Process
  - Safety Assurance Programs

- Lack of financial resources and inefficient resource allocation
In Vienna as IRPA representative 2017

In San Antonio, AAPM Professional Symposium on medical physics certification 2018

In Vienna, representing AAPM, drafting guide 2019