



Pan American Health Organization



*Regional Office of the
World Health Organization*

<http://www.paho.org>

PAHO ACTIVITIES

XVI IACRS MEETING

ILO, Geneva, 12-13 May 2011

Pablo Jiménez

**Regional Advisor in Radiological Health
Medicines and Technologies**

Health Systems based on Primary Health Care (HSS)



GEOGRAPHICAL DISTRIBUTION OF PAHO OFFICES

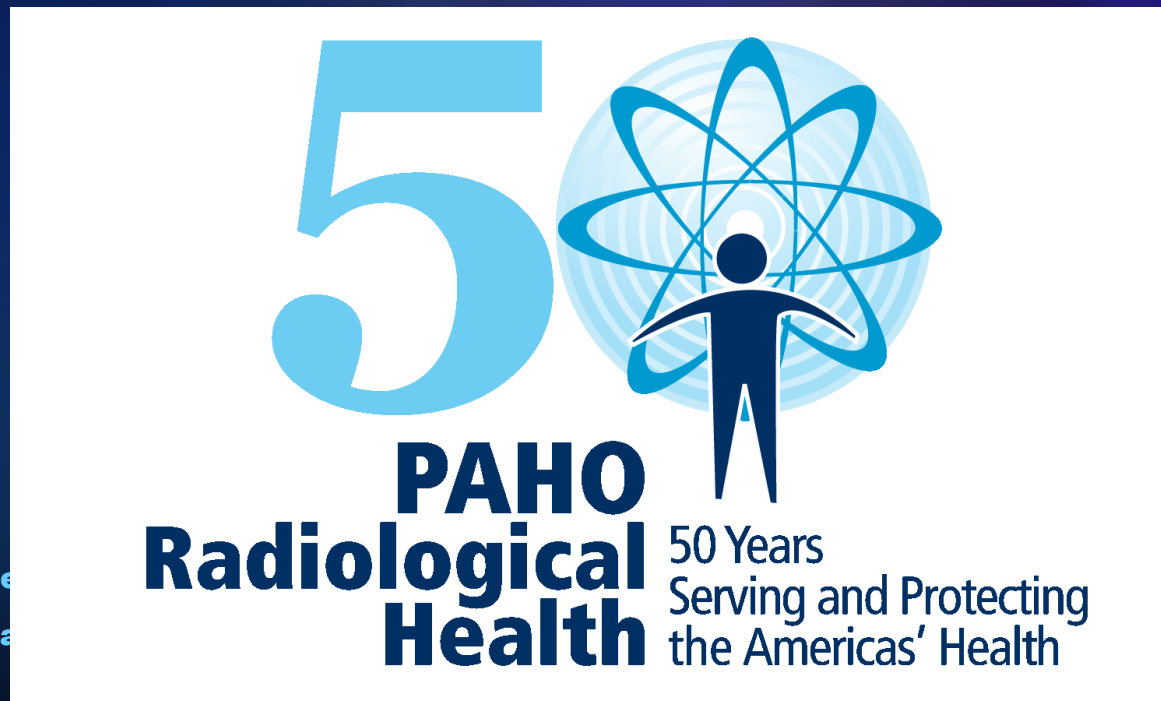
● HEADQUARTERS
○ COUNTRY OFFICES



PAHO is based in Washington, D.C., and has 27 country offices and 9 scientific centers.

PAHO's RADIOLOGICAL HEALTH PROGRAM

- The Radiological Health Program was **established in 1960** for the purpose of promoting the role of the public health authorities in the field of applied nuclear energy.
- In 2010 PAHO celebrated the **50 Anniversary of the Radiological Health Program**



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RADIOLOGICAL HEALTH PROGRAM

PEOPLE OF THE AMERICAS

MOH / NATIONAL HEALTH AUTHORITIES

PAHO/WHO COUNTRY OFFICES

CANCER CONTROL

ACCESS-QUALITY-SAFETY

Imaging Services

Radiotherapy Services

Radiation Safety and Emergencies

Technology Management

Pregnancy; Breast Pathologies; TB; Cancer; Traumatology; Cerebral, Cardiovascular and Respiratory Diseases, etc

Conventional Radiology
Interventional Radiology
Computed Tomography
Mammography
Ultrasound
Magnetic Resonance
Nuclear Medicine

Cobalt Units
Linear Accelerators
LDR Brachytherapy
HDR Brachytherapy

Patients
Workers
Public
Environment

Planning
Purchase
Maintenance
Cost Analysis
Infrastructures
Human Resources

Professional Societies

ALATRO
ALFIM
CIR
IOMP
ISRRT
IRPA

WHO/HQ

PHE/RAD
EHT/DIL
CHP/CPM

PAHO/WHO
Collaborating Centers on
Breast Imaging
Ultrasound

Biological Effects of EMF
Radiological Emergencies

IAEA

TC
NAHU
NSRW
PACT

International Commitments

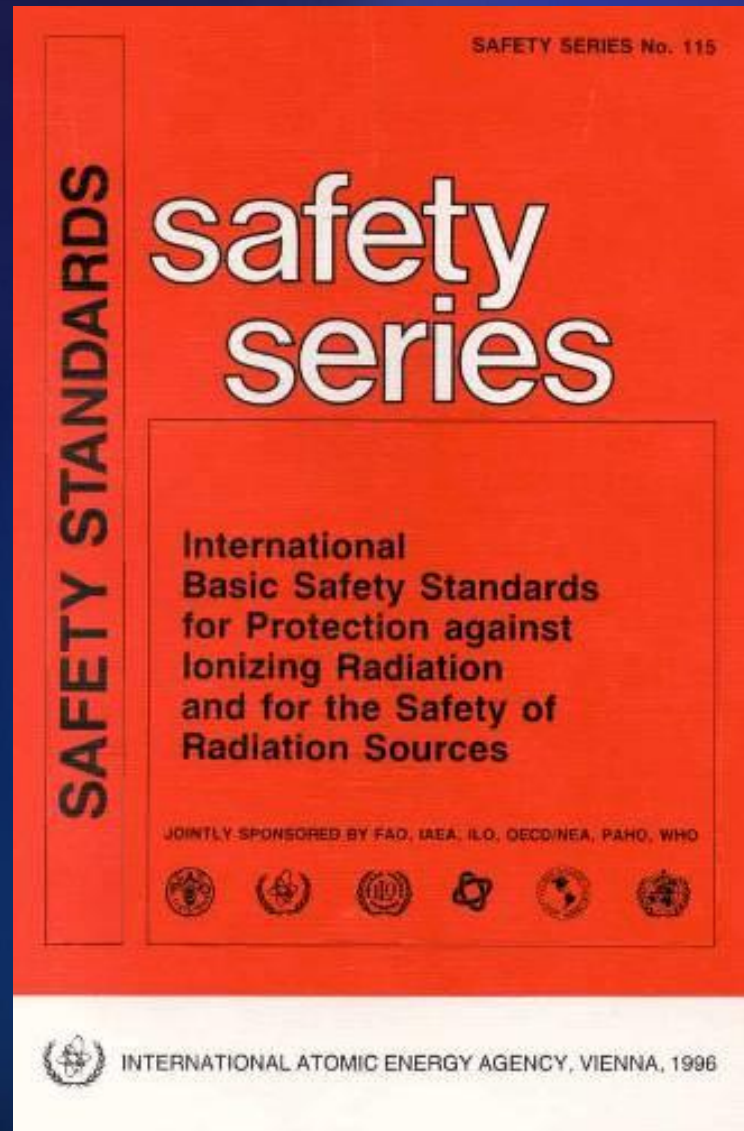
IACRS, IARCNA, RASSC
IAP for RP of Patients
Joint Emergency Plan
BSS Secretariat

MAIN DUTIES

- To promote the proper **planning and organization** of diagnostic imaging and radiotherapy services;
- To advise on the **incorporation and utilization** of appropriate health technologies in these services;
- To advise Governments on related **regulations and legislation in radiological health**.
- To promote **QA programs** in the field of diagnostic imaging, radiotherapy and radiation safety.
- To support comprehensive **educational** programs and specific **training** activities.
- Publishing, cosponsoring and disseminating **guidelines and technical documents**



REGULATORY INFRASTRUCTURES



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REGULATORY ISSUES

- Only 21 countries of the 35 have **Regulatory Body on Radiation Safety**
- The capacity of these existing Regulatory Bodies are **very limited** in general.
- The implementation of the BSS requirements is still far from optimum.
- The ability of the Health Authorities **to properly license** diagnostic imaging and radiotherapy services is **weak**.
- There is a lack or poor mechanisms for recognition or **certification of professionals**



COUNTRY	REGULATORY BODY
Argentina	H & E
Barbados	H
Bolivia	E
Brazil	H & E
Canada	H & E
Chile	H & E
Colombia	H & E
Costa Rica	H
Cuba	H & E
Ecuador	E
El Salvador	H
USA	H & E
Guatemala	E
Mexico	H & E
Nicaragua	E
Panama	H
Paraguay	H & E
Peru	E
Dominican Republic	E
Uruguay	E
Venezuela	H & E

Regulation of Radiological Services

**Radiation
Safety**

**Quality of
Health Care**

Regulatory Body

Health Authorities

**Request radiation
safety as part of QA
Programs**

**Quality
Assurance
includes
Radiation
Safety**

**Issue authorization
Request QA programs to:**

- guarantee patient safety
- improve medical outcome
- justify medical exposures



SPECIFIC ACTIVITIES PLANNED FOR 2011

- ✓ **Updating the regulatory information in PAN, COR, NIC and HON.**
- ✓ **Assessment in VEN, COL and PAR**
- ✓ **Support some regulatory aspects in ARG**
- ✓ **Establish of an Action Plan for BRA**
- ✓ **Two Regional Workshops on Evaluation the National Regulatory Framework on Medical Exposures.**
- ✓ **Dissemination of new BSS in ICMP 2011 (BRA), ALATRO 2011 (PAN), and in SOVERA 2011 (VEN)**



EVALUATION OF RADIOLOGICAL SERVICES

This is a very important ongoing activity to improve **quality, safety and access** to these services



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IAEA/PAHO TLD postal dose audit service for radiotherapy centers in Latin America and the Caribbean Since 1969!

Currently more than 180
radiation therapy beams are
verified annually in 21
countries



- Participante en el servicio TLD del OIEA/OPS
(Núm. de participaciones/Porcentaje dentro de $\pm 5\%$)
- País con servicio TLD propio
(tras participación en el servicio OIEA/OPS)

ACCESS TO THESE SERVICES

- Available diagnostic imaging and radiotherapy facilities **varies widely** around the Region.
- In most countries, the level of **use and access** to these services is **far lower** than in the industrialized countries.
- Access to these services within the country is also inequitable for both **geographical and economical reasons**:
 - ✓ Most of these services are located in **big cities**, so a large part of the **rural population** has no access to them.
 - ✓ Their high cost also makes them inaccessible to **poor urban populations**.

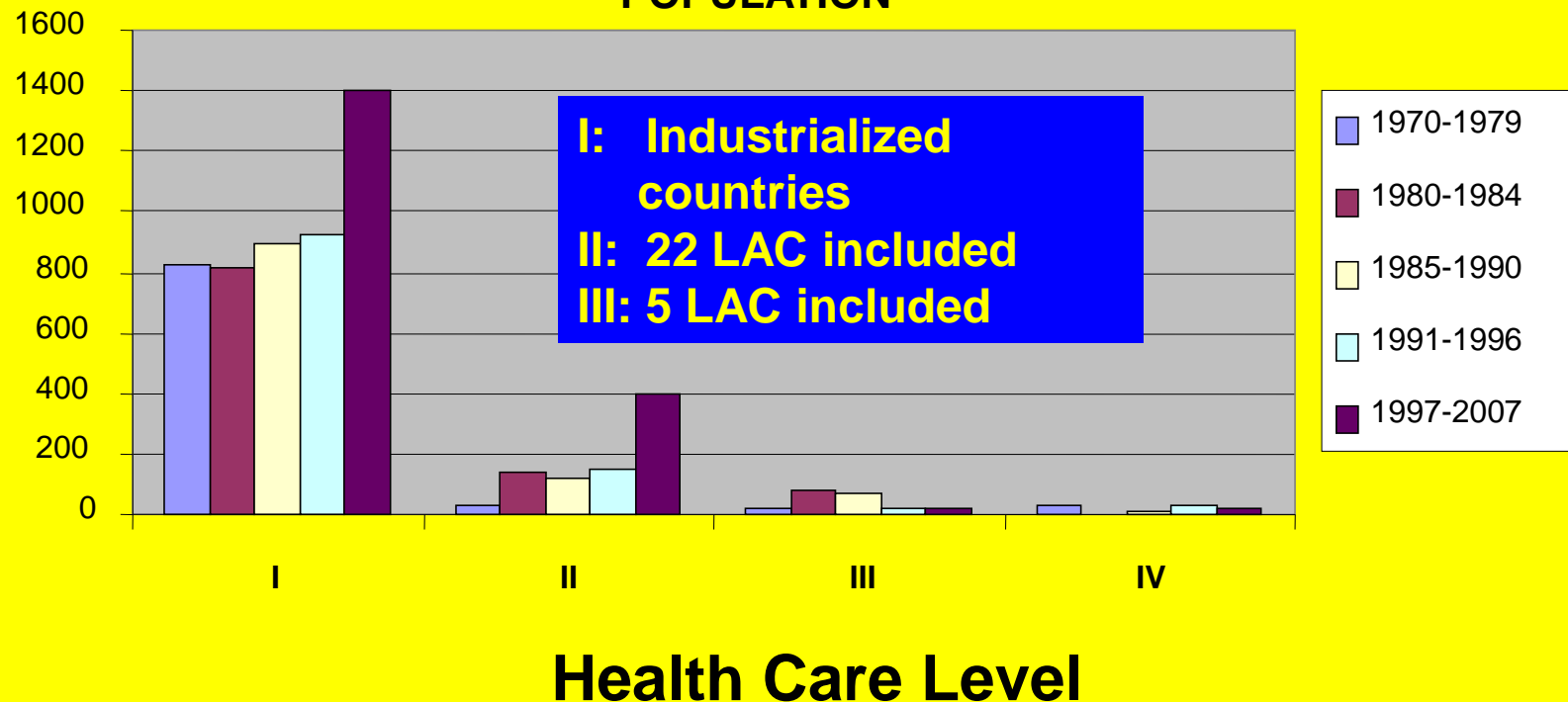


United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)

Report to the United Nations General Assembly 2008

Trends in the annual frequency of diagnostic medical and X-ray examinations for each health care level.

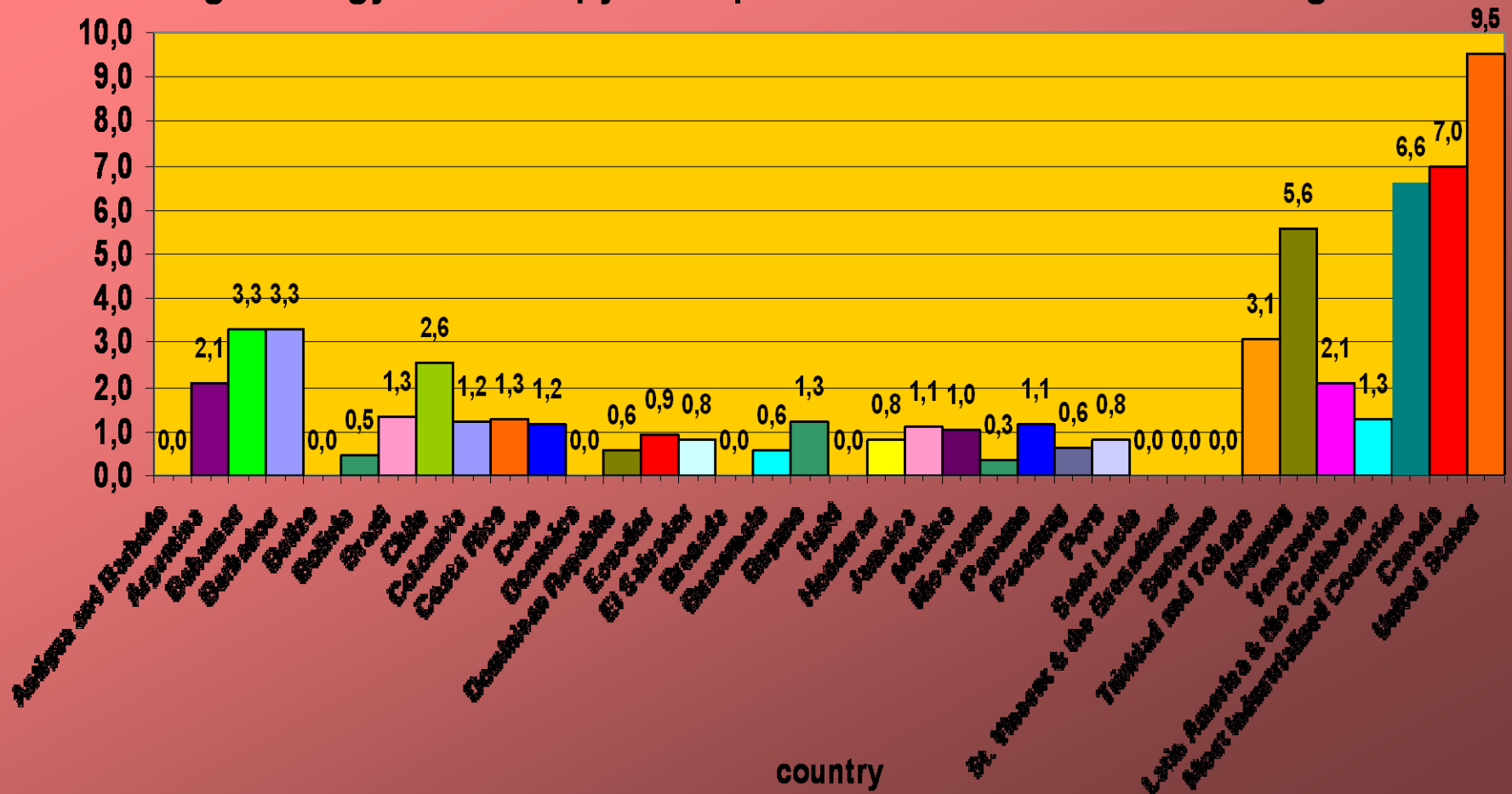
NUMBER OF ANNUAL EXPLORATIONS PER 1000 POPULATION



RADIOTHERAPY CAPACITY

Comparison Latin America and the Caribbean versus industrialized countries in 2010

High Energy Teletherapy Units per million inhabitants in the Region



INCORPORATION OF APPROPRIATE TECHNOLOGY



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TECHNOLOGY ISSUES

- Weak **health technology assessment** capacity
 - ✓ Disproportional **high technology** incorporation for the situation of the Region.
- Lack of **technology management** and planning
 - ✓ Many of the technology, purchased or donated, is **still in boxes or clearly underused**
- Increasing **pressure by the industry**

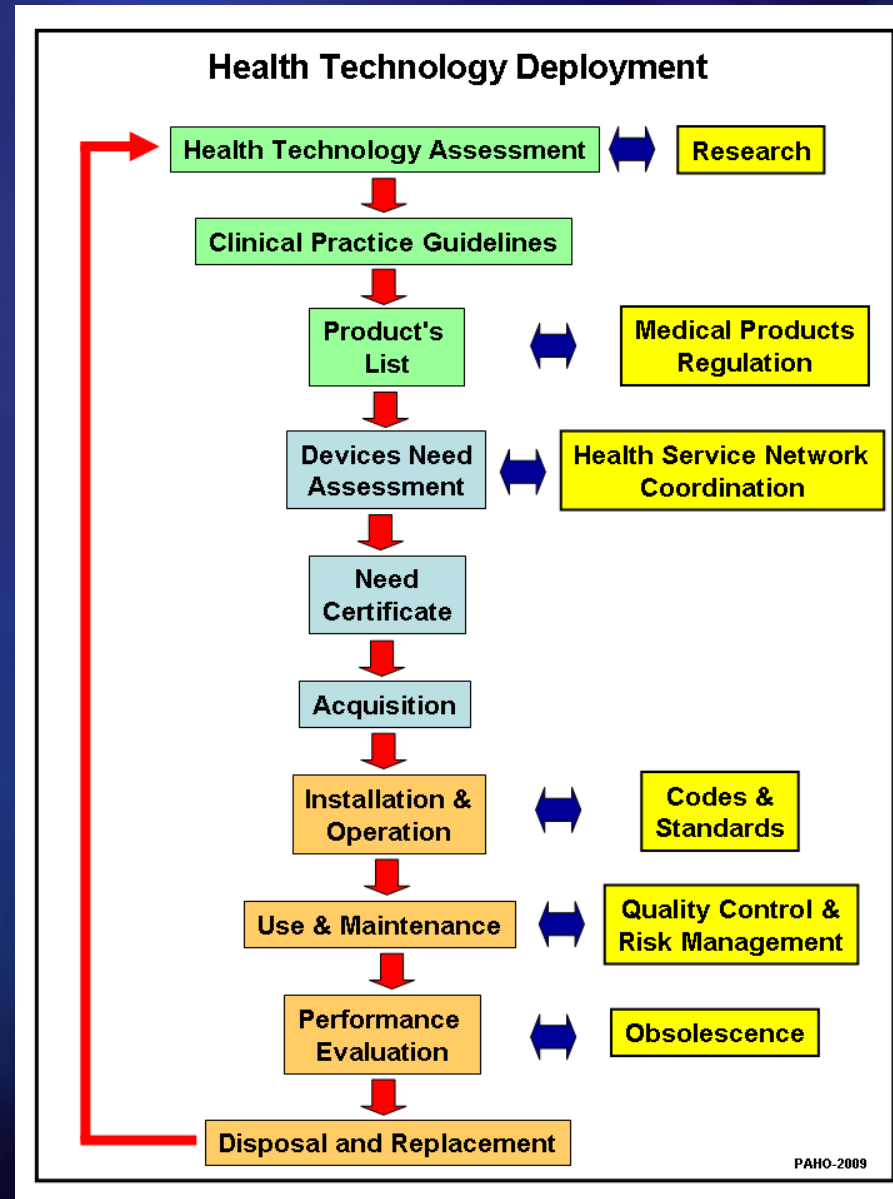


INCORPORATION OF TECHNOLOGY

- **Perform studies of feasibility**
 - ✓ Planning of services
 - ✓ Human resources
 - ✓ Cost Analysis
 - ✓ Maintenance
 - ✓ Infrastructures
 - ✓ Sustainability
- **Prepare technical specifications**
- **Proceed with purchase when requested**



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SPECIFIC ACTIVITIES PLANNED FOR 2011

- ✓ **Incorporation of 30 Digital Multipurpose Radiology equipments jointly with Rotary International in GUT**
- ✓ **Incorporation of Ultrasound Equipments jointly with Medical Imaging Partnerships in GUY**
- ✓ **Assessment of the radiotherapy services in TRT, SUR, GUT and DOR.**



HUMAN RESOURCES



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HUMAN RESOURCES ISSUES

- There is a clear **shortage of Radiologists, Radiation Oncologists, Medical Physicists, Radiological Technologists/Radiographers, and Experts in Radiation Protection.**
- Only some countries have a **formal education programs** of these professionals, but in general follow a **poor curricula**
- The possibilities to obtain additional or **Continuing Education Training** are very limited in many of them.
- There is a lack or poor mechanisms for **recognition or certification** of these professionals



TRAINING AND EDUCATION

We organize and promote many courses and educational activities for:

- **Medical physicists**
- **Radiological medical practitioners**
- **Radiological technologists and radiographers**
- **Experts in Radiation Protection**

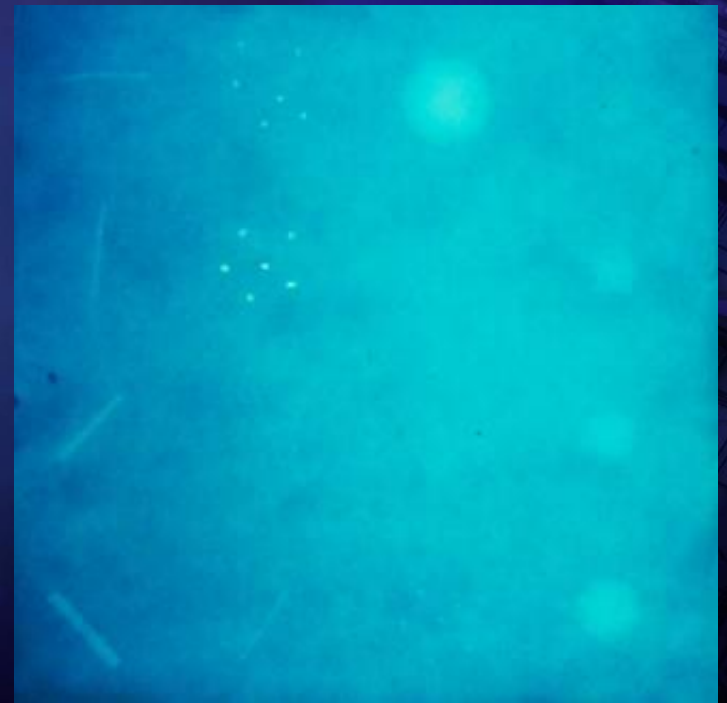


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SUMMARY OF COURSES IN RADIOLOGY

55 NATIONAL / REGIONAL COURSES (1990 - 2010)

- 22 Multipurpose Radiology
- 16 Mammography
- 7 Computed Tomography
- 1 Advanced Radiology
- 3 Paediatric chest X-ray
- 4 Interventional Radiology
- 1 Maintenance of Radiology
- 1 Pregnancy



QA COURSES ON RADIATION THERAPY FOR MEDICAL PHYSICISTS AND/OR RADIATION ONCOLOGISTS

- 1998 Ecuador
- 2002 Colombia
- 2004 Uruguay (Clinical QA)
- 2005 Brazil
- 2007 Cuba
- 2007 Colombia
- 2008 Mexico (Clinical QA)



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Petropolis. BRAZIL. April 2005

2011

Training Courses Organized



PLANNED FOR 2011

- **2 National courses on Mammography in DOR and NIC**
- **1 National course on Digital Radiology in GUT**
- **National courses on Ultrasounds and on Multipurpose Radiology in GUY**
- **1 Regional course on CT in PER**



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2011

PAHO RESPONSE TO JAPAN

- On 11 March the PAHO EOC was activated to level 2 during the first 48 hours
- Since then, the EOC continues at level 1 for monitoring the nuclear emergency
- Information is being received from the Early Notification and Assistance Conventions (ENAC) website
- Participating in the teleconferences with IACRNE member organizations
- Elaborating FAQs tailored to the Region and updating the PAHO website.
- Addressing the media from the Region and responding official questions from the Member States

We have requested the Member States to take the opportunity to revise the national capacities to respond to this type of emergencies



REVISTA
PANAMERICANA
DE SALUD PÚBLICA



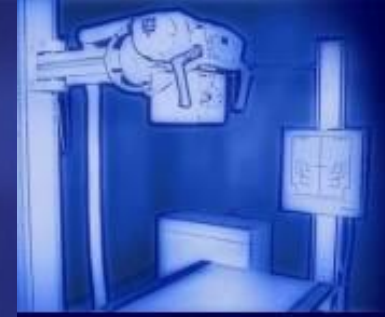
PAN AMERICAN
JOURNAL OF
PUBLIC HEALTH

CONSEJO EDITORIAL
CONSTITUCIÓN Y ORGANIZACIÓN
MÉDICO Y BIOMÉDICO
COMITÉ EDITORIAL

Artículos e informes especiales /
Articles and special reports

- The role of professional institutions in radiologic services
- Necesidad de un diagnóstico de radiología en los países latinoamericanos
- La calidad de los servicios de radiología en cinco países latinoamericanos
- Serwening radiologic services: a successful public health initiative
- A monografía con ejemplos de postgrados en radiología nuclear en América Latina
- Una historia tecnológica responsable en el radiodiagnóstico en América Latina
- How to meet complex needs in the industrial therapy
- Prácticas de radiología nuclear en los países de América Latina y el Caribe
- Creación de un sistema de radiología nuclear en Colombia
- La regulación de la radioterapia en los países de América Latina y el Caribe
- Knowledge, capacity and progress in radiologic services in Latin America
- Normas y estándares aplicables a los servicios de radiología nuclear en los países de América Latina

Vol. 20, Noe. 2/3
Agosto-Septiembre 2006



GUÍA DE GESTIÓN
E INCORPORACIÓN DE TECNOLOGÍA
RADIOLOGÍA DE PROPÓSITOS GENERALES

Colectivo de autores

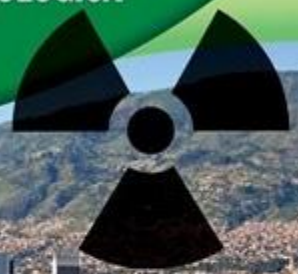


Organización Panamericana de la Salud
Editorial Ciencias Médicas



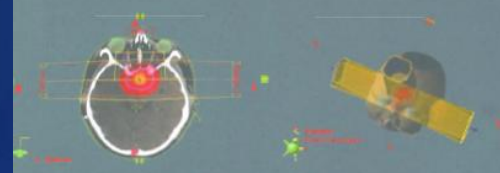
REVISTA
LATINOAMERICANA DE
PROTECCION RADIOLOGICA

Vol. 1 Noe. 1, 2011
ISSN 2219 - 8326



PAHO PUBLICATIONS

EVALUACIÓN DE LOS SERVICIOS
DE RADIOTERAPIA EN COLOMBIA



INSTITUTO NACIONAL DE CANCEROLOGÍA
MINISTERIO DE LA PROTECCION SOCIAL
OPS/OMS

History of the
**Radiological
Health Program**
of the Pan American
Health Organization:
1960–2010



50 Years Serving and Protecting
the Americas' Health



COSPONSORING RELATED PUBLICATIONS

Safety Reports Series No. 39

Applying Radiation Safety Standards in Diagnostic Radiology and Interventional Procedures Using X Rays

Jointly sponsored by
IAEA, ILO, ISRR, ISR, IOMP, PAHO, WHO



Safety Reports Series No. 40

Applying Radiation Safety Standards in Nuclear Medicine

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Applying Radiation Safety Standards in Radiotherapy

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MANY THANKS



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www.paho.org/radiologicalhealth

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