

# ROUND TABLE 4: Challenges in implementing occupational radiation protection

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## *Latin America*

*luiz.matta@ird.gov.br*

# Latin America

## Challenges to whom?

- To Regulatory Authority
- To end users
  - By practices: nuclear, industry, medicine, etc.
- Service providers
  - Individual monitoring, Calibration, training, etc.
- Workers – Union, Syndicate
  - By practices

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## Challenges to whom?

- Workers – Union, Syndicate
  - Requirement 22: Compliance by workers
  - Workers shall fulfil their obligations and carry out their duties for protection and safety.

- Radiation Protection and Safety of Radiation Sources:
- International Basic Safety Standards General Safety Requirements Part 3

- 3.83. Workers:
  - (a) Shall follow any applicable rules and procedures for protection and safety as specified by the employer, registrant or licensee;
  - (b) Shall use properly the monitoring equipment and personal protective equipment provided;
  - (c) Shall cooperate with the employer, registrant or licensee with regard to protection and safety, and programmes for workers' health surveillance and programmes for dose assessment;
  - (d) Shall provide to the employer, registrant or licensee such information
    - on their past and present work that is relevant for ensuring effective and
    - comprehensive protection and safety for themselves and others;
  - (e) Shall abstain from any wilful action that could put themselves or others in situations that would not be in accordance with the requirements of these Standards;
  - (f) Shall accept such information, instruction and training in protection and safety as will enable them to conduct their work in accordance with the requirements of these Standards.
- 3.84. A worker who identifies circumstances that could adversely affect protection and safety shall report such circumstances to the employer, registrant or licensee as soon as possible.

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## Challenges to whom?

- Workers – Union, Syndicate
  - Requirement 22: Compliance by workers
- Workers shall fulfil their obligations and carry out their duties for protection and safety.
- **I think there should be a strong participation of union workers on safety and security issues in general.**
- **In many industrial activities already exists.**
- **Is usually part of the governance of large companies.**
- **Unions must act preferentially targeting safety and security issues and verify if the employee is able to perform the task it was intended.**

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## Challenges to whom?

- Service providers
  - Individual monitoring, Calibration, training, etc.
- Obtain accreditation in ISO-IEC17025.
- Dosimetry of the lens - methodology, calibration, geometry, occupational control.
- Dosimetry extremities - fingers x wrist
- Use of chapel in handling radiopharmaceuticals
- Implementation of OSL dosimetry
- Approval of active dosimeters - especially in practices with high doses.
- National Register of Doses

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## Challenges to whom?

- To end users
- Registrants
  - By practices: nuclear, industry, medicine, etc.
- Maintaining a ORP structure in accordance with the magnitude of the installation. Typically, the budget priority to safety has low or none priority.
- To inform the entire task force the risks of the Practice that is directly or indirectly connected.
- Collaborate with other employers when there is potential exposure of other workers for their source or their workers being exposed by third party sources.

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## Challenges to whom?

- To end users
  - By practices: nuclear, industry, medicine, etc.
- Implementing optimization programs and safety culture. Inadequate understanding of optimization.
- Keep the workforce, enabled and empowered
- Encourage the task force to take part in the decisions concerning the ORP.
- Incomplete reporting of incidents and accidents.

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## Challenges to whom?

### ➤ To Regulatory Authority

- *Support the implementation of all previous actions.*
- **Implement a legal framework in accordance with the magnitude of risk of existing practices in the country.**
- **Maintain structure inspection and enforcement in accordance with the magnitude of existing practices. Missing legislation as to for example, fines for accidental doses.**



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## Challenges to whom?

### ➤ To Regulatory Authority

- The performance through inspections is not enough. Inspectors are not well prepared and trained, generally.
- Actions to obtain the commitment of Registrants to collaborate with the Regulatory Authority.
- Train and retrain the RA's workforce to deeply understand the local requirements.

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## Challenges to whom?

➤ To Regulatory Authority

- **Acting and partnership with other organizations in order to provide requirements for authorization of service providers. Infrastructure is not capable and sufficient to authorize the operation of monitoring and calibration services (just OK is not enough).**
- **Find a TSO that gives support to the strengthening of ORP in the country.**

# Latin America



## Challenges to whom?

➤ To Regulatory Authority

- Consider practices involving **NORM**
- Understand that it is not necessary to have experts in all areas to do something and secondly the fact of not having a specialist is no excuse for doing nothing.

# Posters

SPANISH



# Posters

## Portuguese

### RADIOPROTEÇÃO DOS TRABALHADORES Irradiadores Industriais

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em irradiadores industriais.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Irradiadores Industriais**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





### RADIOPROTEÇÃO DOS TRABALHADORES MEDICINA NUCLEAR

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em medicina nuclear.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Medicina Nuclear**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





### RADIOPROTEÇÃO DOS TRABALHADORES Medidores Nucleares

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em medidores nucleares.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Medidores Nucleares**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





### RADIOPROTEÇÃO DOS TRABALHADORES RADIODIAGNÓSTICO

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em radiodiagnóstico.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Radiodiagnóstico**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





### RADIOPROTEÇÃO DOS TRABALHADORES Radiografia Industrial

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em radiografia industrial.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Radiografia Industrial**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





### RADIOPROTEÇÃO DOS TRABALHADORES Radioterapia

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em radioterapia.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Radioterapia**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





### RADIOPROTEÇÃO DOS TRABALHADORES Traçadores Radioativos

**Objetivos**

- 1. Conhecer os riscos associados à utilização de fontes radioativas em traçadores radioativos.
- 2. Conhecer as medidas de proteção a serem adotadas para garantir a segurança dos trabalhadores e do público.
- 3. Conhecer as normas regulamentadoras aplicáveis a esta atividade.

**Conteúdo**

**1. Fontes Radioativas em Traçadores Radioativos**

**2. Medidas de Proteção**

**3. Normas Regulamentadoras**

**4. Conclusões**

**5. Referências**





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[luiz.matta@ird.gov.br](mailto:luiz.matta@ird.gov.br)