

The logo of the International Radiation Protection Association (IRPA) is a stylized teal emblem. It features a central vertical line that curves at the top and bottom into two large, open, teardrop-like shapes. These shapes are further defined by two additional curved lines that intersect them, creating a complex, symmetrical design. The logo is set against a dark blue background.

IRPA

**From the gap to the evidence...
An IRPA initiative on RP culture**

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Introduction

- Events occurring in the areas of radiotherapy and interventional radiology, resulting from accidental overexposures in medical environments
- As well as events occurring in our day-to-day practices
- (Increase in radiation dose due to the TDM scan in the United States and Europe and more specifically, radiation exposure during childhood)
- have shown us that in addition to good medical practices and continuous improvement of RP performance, radiation protection practices need to be embedded within a common and sustainable culture.

- An ongoing process on IRPA RP culture Guidelines for professionals From nuclear industry to the medical sector



Why are we interested in a specific Radiation Protection Culture?

- **Embedding RP at a cultural level within an organization is by far the most effective way of delivering the performance to which we all aspire.**
 - To give visibility to the fundamentals of RP (science and values)
 - To promote radiation risk awareness
 - To promote shared responsibility among practitioners, operators, manufacturers, management and regulators
 - To maintain the RP heritage
 - To facilitate its transmission
 - To improve continuously the quality and effectiveness of RP
 - To contribute to the general safety



Elements and Traits of an Radiation Protection / Safety Culture

- **Culture comes from three sources:**
- (1) beliefs, values, and assumptions of the founders of an organization,
 - (2) learning experiences of group members as the organization evolves, (Groups of people who have shared significant problems, solved them, observed the effects of their solutions, and who have taken in new members)
 - (3) beliefs, values, and assumptions brought in by new members and leaders.



Organizational Culture

- **Organizational structure institutionalizes**
 - **how people interact with each other,**
 - **how communication flows and how power relationships are defined.**
 - **It also reflects the value based choices made by the professional society**
- **For example, in a total safety culture, employees or practioners not only feel responsible for their own safety, they feel responsible for their peers' safety,**
 - **and the organizational culture supports them acting on that responsibility.**



Safety Culture , From nuclear industry to the hospital

<u>Leadership Safety - Values and Actions</u>	<u>Problem Identification and Resolution</u>	<u>Personal Accountability</u>
<u>Leaders demonstrate commitment to safety</u> in their decisions and behaviors	Potential impacts on safety - promptly <u>identified, evaluated, prioritized, addressed and corrected</u> (QA, QI program,)	<u>All individuals take</u> personal responsibility for safety
<u>Work Processes</u>	<u>Continuous Learning Education and Training</u>	<u>Environment for Raising Concerns (transparency)</u>
Maintain & enhance safety when planning and <u>controlling work</u> activities	Seek opportunities to learn & Implement safety methodologies	Personnel feel free to raise safety concerns <u>without fear</u>
<u>Effective Safety</u>	<u>Communication</u>	<u>Respectful Work Environment , Questioning Attitude</u>
Communications focus on safety (<u>is the need to establish a common language</u>)	Trust and respect permeate the organization	Individuals identify discrepancies in existing conditions & inappropriate actions



Position of the Radiation Protection Professional

- **Need to develop:**
 - Relationship with Physician and Health Physicist
 - Relationship with Patients
 - Relationship with the regulators
 - Involvement with other relevant stakeholders



A practical example of engagement with stakeholders (role of manufacturers)

- Radiation dose optimisation in children requires a high level of technicality
 - Continuous search for the most appropriate techniques
 - Use of restraint systems
 - Choice of parameters for a multitude of morphotypes
- To involve manufacturers, designers, and vendors with compelling evidence showing that RP is a selling point, thereby decreasing radiation dose received from x-rays.
- Ex: ASIR system **Adaptive Statistical Iterative Reconstruction**

1 mSv Cardio , Neuro, Colonographie & Thorax
2 mSv pour Abdomen / Pelvis

