



# European ALARA Network Meeting 2<sup>nd</sup>-4<sup>th</sup> October 2023

## **Radiation Safety Culture in Interventional Radiology Perspective from the UK and the IRPA TG**

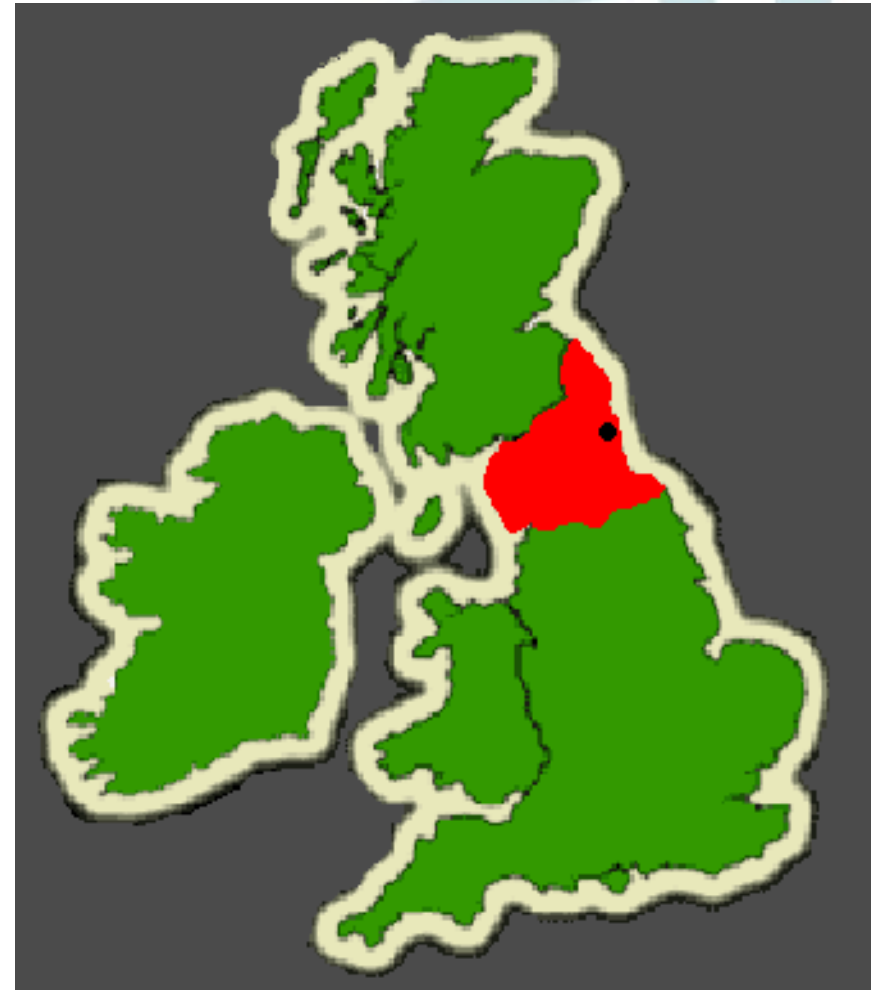
***Claire-Louise Chapple***

*IRPA Executive Council*

*Newcastle Hospitals NHS Foundation Trust*



# Newcastle upon Tyne





# International Radiation Protection Association (IRPA)

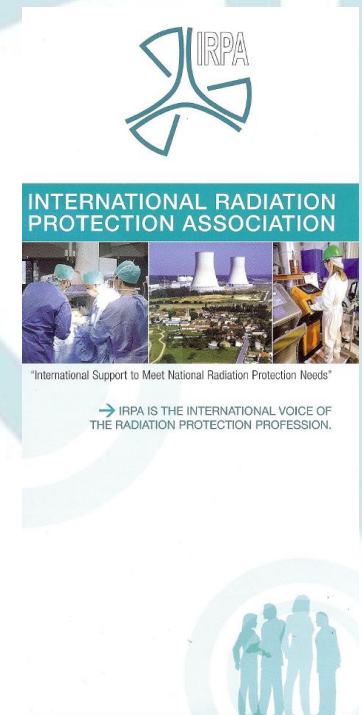
**The international professional association for  
RP practitioners since 1965**

**53 Associate Societies**

**68 countries**

**over 18 000 individual members**

*Enormous resources of practical knowledge  
and experience in radiation protection  
including scientists, operators, regulators,  
medical practitioners and advisors.*



*Covering a multicultural background, large and small societies*



# Outline

- What is Radiation Protection/Safety Culture?
- IRPA initiatives
  - Radiation Protection Culture in general
  - Radiation Safety Culture in Medicine
  - Task Group
- Observations from UK hospital



# Early proposal for a definition of RP culture

The term “RP culture” means the way in which RP is founded, regulated, managed, performed and preserved by professionals but also reflects the attitudes, beliefs, perceptions and values that they share in relation to RP.

*(Paris workshop, December 2009)*



# Why do we need Radiation Protection Culture?

- To give visibility to the fundamentals of RP (science and values)
- To promote radiation risk awareness
- To promote shared responsibility among practitioners, operators, regulators and management
- To maintain the RP heritage
- To facilitate its transmission
- To improve the quality and effectiveness of RP
- To contribute to the general safety
- To improve communication with society
- To enhance the visibility of RP in our societies

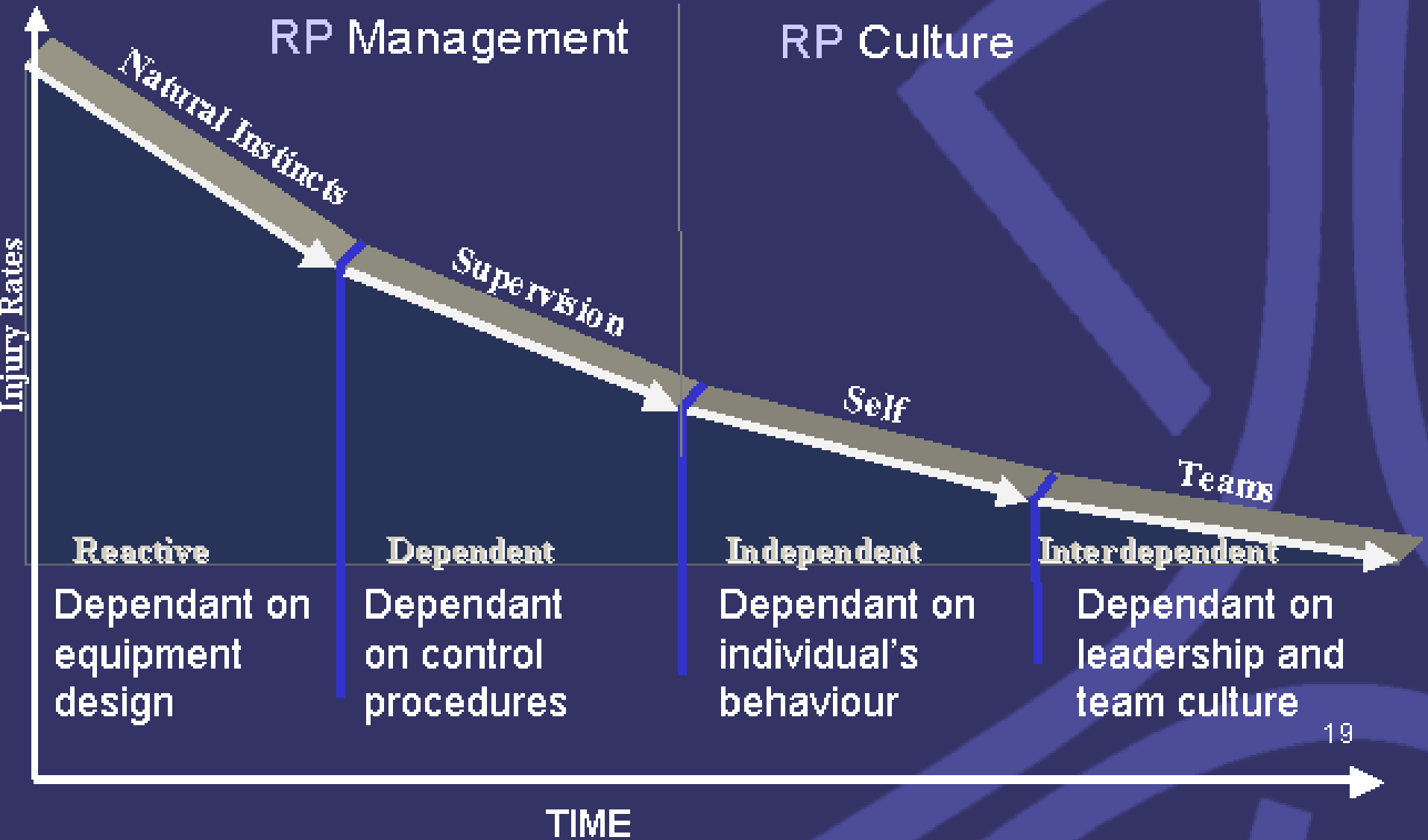




# Key elements of RP culture



- Knowledge
- Values and ethics principles:
  - justification
  - ALARA
  - limitation
- Experience
- Behaviour
- History of radiation protection







# First IRPA Publication on RP Culture



- From nuclear industry to the medical sector, this first IRPA Guiding Principle on RP Culture was a common document about culture from the perspective of professionals, geared towards professionals

- **The purpose was to capture the opinion and standpoint of RP professionals on what constitutes a strong RP culture.**

- This guidance was developed in an inclusive and consultative approach





# Enhancing RP Culture is a Process

IRPA's Guiding Principles incorporate approaches from different countries and regions of the world, and from different sectors: medicine, industry and regulators.



2nd IRPA Workshop on Radiation Protection Culture  
Thursday 10 and Friday 11 February 2011

INTERNATIONAL RADIATION PROTECTION ASSOCIATION



1st IRPA Workshop on Radiation Protection Culture

organised by



International Relation Commission



United States Nuclear Regulatory Commission  
Protecting People and the Environment



Jornada de Cultura de la Protección Radiológica  
Día 15 de junio de 2.009  
Cátedra Rafael Mariño del Instituto de Ingeniería de España. Madrid

Monday 14 and Tuesday 15  
December 2009



UNION INTERNATIONALE  
DES CHEMINS DE FER  
16, rue Jean Rey  
75015 PARIS



El objeto de esta Jornada es presentar las manifestaciones concretas de la cultura organizativa y su influencia en los resultados y en la producción radiológica de la radiación y dar a conocer las competencias mínimas y potenciales requeridas para generar los correspondientes subculturas en organizaciones que requieren situaciones estándares de fiabilidad y seguridad.

CULTURA ORGANIZATIVA, CULTURA DE SEGURIDAD Y DE LA PROTECCIÓN RADIOLÓGICA. INTEGRACIÓN DE LA CULTURA EN EL MODELO DE GESTIÓN, EVALUACIONES PRODUCTIVAS DE LA CULTURA, TÉCNICAS DE BIENESTAR, INCORPORACIÓN A LA CULTURA DE LA PROTECCIÓN RADIOLÓGICA, INFLUENCIA DE LOS OBJETIVOS Y DE LOS GESTORES EN EL DESARROLLO DE LA CULTURA. UNIDAD, COMPETENCIAS DIRECTIVAS.



con la colaboración de:





# IRPA IOMP WHO Project

*Second initiative launched in collaboration with WHO and IOMP, later IAEA, on Safety Culture in Health Care*



**Diagnostic radiology**



**Interventional radiology**



**Radiotherapy**



**Nuclear Medicine**

*The goal : To promote safe and appropriate use of radiation in health care*

Pledge: “In our hospital we work as a team to ensure effective use of radiation and protect the patient and our staff”





# Project workshops



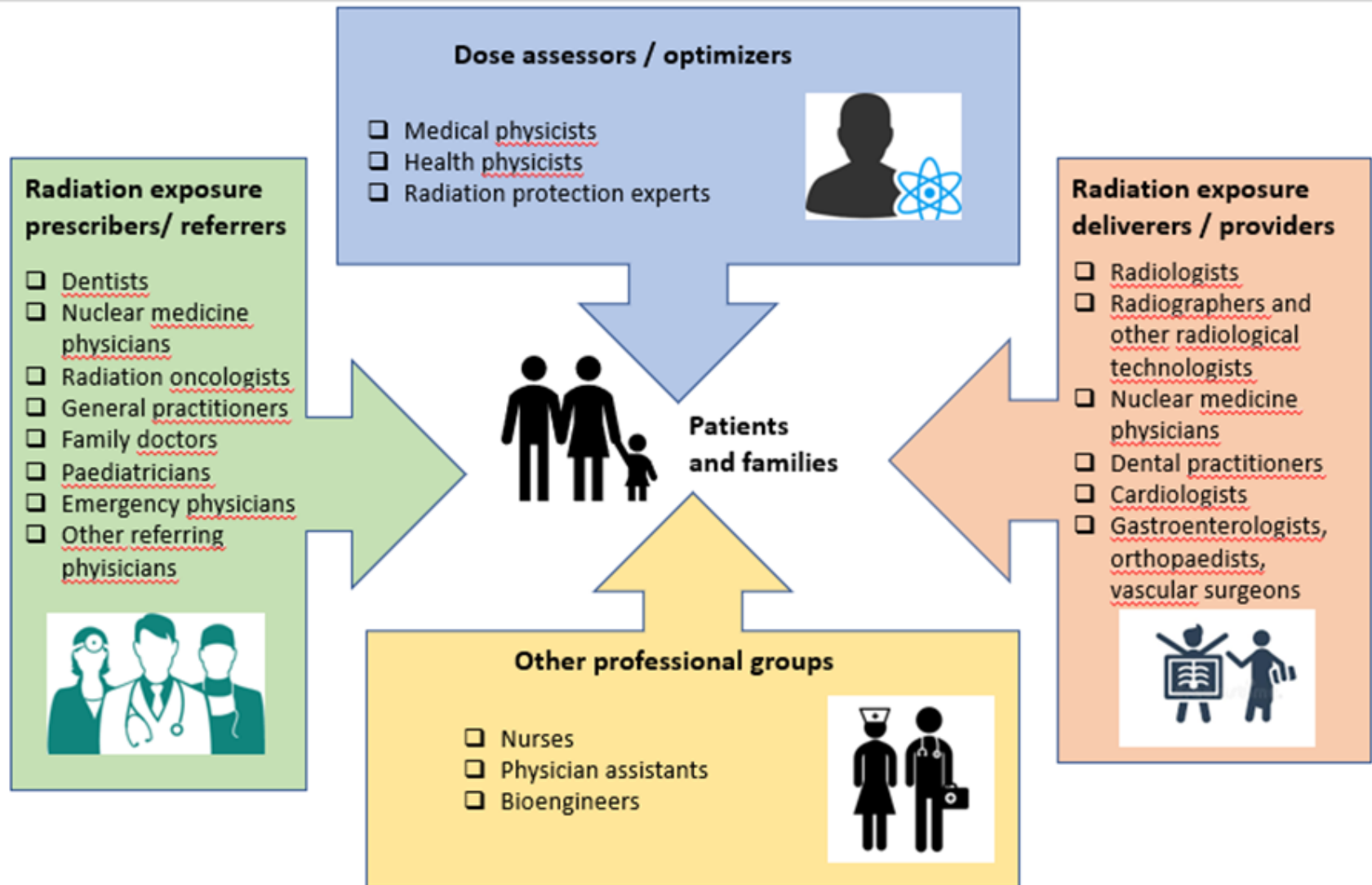
The consultation principle was the same as previously,  
Meetings held in the form of 3 round table sessions on each continent with the participation of regional players :

- representatives of professional medical associations of physicians,
- patients
- and regulators, as well as of medical equipment vendors).

The aim: to record their recommendations, post them on the IRPA website and thus gradually expand on these common efforts, taking account of regional issues and needs.



# Healthcare groups involved in workshops





# Key themes emerging from workshops





# Objective : a common IRPA - IOMP- WHO - IAEA guiding principle for establishing and promoting RSC in Health Care



Chapter 1: Introduction - defining culture and terminology

Chapter 2 : Lessons from safety culture in other areas

Chapter 3 : Radiation safety culture in healthcare applications

Chapter 4 : Radiation safety culture in healthcare as part of organisational management

Chapter 5 : Tools for establishing and maintaining radiation safety culture in healthcare

Chapter 6 : Assessment of radiation safety culture in healthcare

Chapter 7 : Examples of good practice of radiation safety culture in health care

Chapter 8 : Conclusions and recommendations





# TG on Radiation Safety Culture in HealthCare



- To publicise the IAEA/IOMP/IRPA/WHO document to AS as soon as it becomes available
- To encourage local adaption of the RS culture framework and tools provided
- To assess the impact of local initiatives to improve RS Culture in Healthcare
- To provide a forum for sharing experiences of implementation & further guidance as required – ***Workshop in 2024***



# Current progress of RS Culture Task Group

- Task Group has 24 members, representing 15 AS
- 3 introductory meetings and 3 follow-up meetings (all virtual)
- Individual projects have started – assessing and/or improving radiation safety culture in local setting, including
  - Nuclear medicine
  - Interventional radiology
  - Paediatric radiology



# Example of local project (interventional radiology)

- Based in UK
- Focused on area where safety culture observed to be poor
  - Difficult relationships between staff groups
  - Lack of challenge re poor practice



# Example of local project (interventional radiology)

- Initial self-assessment of culture in interventional cardiology department
- Medical Physics ‘facilitator’ to work in department 1 day a week for a period of up to 6 months as part of team
  - Build relationships
  - Improve knowledge
- Repeat of initial culture assessment



# Results of radiation culture survey in UK

- Good awareness of radiation risk and safety procedure in responding group
- Poor knowledge of doses (own and patients)
- Some issues with staff working only intermittently with radiation
- Comments received indicating poor practice of other staff groups



# Local actions to improve radiation safety culture in IR

- Engagement of senior management
  - Execs through radiation protection committee
  - Senior radiographer as RPS
- Engagement of clinical staff
  - Face to face training sessions
  - Regular meetings
- Feedback on doses
  - Staff monitoring data
  - Patient KAP data
  - High skin doses



# Observed improvements

- Improved use of PPE and positioning
- Improved use of dosimetry (somewhat)
- Greater awareness of technique in high dose procedures
- Better training of nursing and ancillary staff
- More conversations!





**And finally...**

**Safety is not just the sum total of rules, policies, procedures and processes. The real building blocks of safety are trust, communication and culture.**

**Thank you!**

