Ethical Issues and Radiation Protection Culture

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IRPA Vision

IRPA is recognized by its members, stakeholders and the public as the international voice of the radiation protection profession in the enhancement of radiation protection culture and practice worldwide.

The Principal IRPA Challenge: Making this Vision a reality
IRPA is an international association of individual RP practitioners joining through national or regional societies.

- 50 Associate Societies
- Representing 63 countries
- Almost 18,000 individual members

Enormous resources of practical knowledge and experience in radiation protection:
scientists, operators, regulators, medical practitioners, government advisers
Radiation Protection in a changing society

**Increasing globalization**

- Importance of economic cross linking
- Global transmission of new and complex technologies
- Innovations e.g. in transport
- Revolution in communication
- Emerging diseases
- Factors related to terrorism

- Society is changing and this also poses new challenges for the implementation of an effective protection system.

- Clear understanding of radiation risks is an increasingly emerging concern – people are more concerned on the same level of risk!

- Towards a knowledgable society
ARISTOTLE:

“having the right knowledge is merely one aspect in being able to make the correct judgment”

Enormity of information by increasingly rapid development in today’s scientific and technological world

“Informed consent”: being able to correctly process all information given

Communication: important issue in justification

clarity, accuracy + sensitivity on the part of the agent

Ethical sense:

not simply agreeing on the basis of someone’s knowledge but also being in a position to agree
Facts are full of nuances and shadings and not only black and white.

Where is the loophole?

Ref.: StrahlenschutzPRAXIS Issue 4/2014 page 11
Radiation Protection in a changing society

Social, Political and Ethical Issues

Practicability of RP system

scientific stringency

in accordance with accepted ethical values

political and social values

"Radiation protection is not only a matter for science. It is a problem of philosophy, and morality, and the utmost wisdom."

The Philosophy Underlying Radiation Protection

Am. J. Roent. Vol. 77, N° 5, 914-919, 1957

From address on 7 Nov. 1956

Lauriston S. Taylor (1902 – 2004)
Facts

- Statement of Taylor hasn’t lost its validity in radiation protection to date!!
- Professionals are faced with it daily in their decisions on all areas of life

- Are they acting on the basis of ethical principles?
- Do they respect a high level of safety culture?
- Is there an ethical optimum in radiation protection? If yes, where?
Goals of activities

Ensuring that the system of protection is fit for purpose, credible and understood by, all those impacted by radiation

Establishing values and ethical norms which are accepted world-wide

*Is the RP system shaped by occidental ethics??*
Timeline of RP professionals activities

• 2012  ICRP Main Commission formally initiates collaborative effort on philosophy of radiological protection, inviting IRPA to collaborate

• Aug 2013  – 1st Asian workshop, Daejeon
• Dec 2013  – 1st European workshop, Milan
• Jun 2014  – SRP workshop, London
• Jul 2014  – 1st North American workshop, Baltimore
• Feb 2015  – 2nd European workshop, Madrid
• Mar 2015  – 2nd North American workshop, Cambridge
• Jun 2015  – 2nd Asian workshop, Fukushima
• Sep 2015  – 1st FS workshop, Böttstein / Switzerland
Main Points: Daejeon

(Public) Communication

- Complexity of the system of radiological protection
- Communicating radiological protection in simpler language
- Failure of patriarchal top-down approach to risk communication
  - Need to address questions asked by the public
- Public misunderstanding
  - Living in a “radiation free” world
  - Equating radiation with atomic bombs
Main Points: Milano

A set small of central values were identified.

Focus on understanding and applying these values, rather than worrying too much about classical philosophical traditions.

Observation of a sort of convergence between procedural ethics and behavioral ethics with transparency and accountability related to procedure as well as honesty and humility related to behavior.

Use plain language and examples of practical application of these values to ensure a broad common understanding.

ICRP is charged with development of the System of Radiological Protection, but it is essential to prepare the ethics publication cooperatively with the broader RP community.
The issue of justification was identified as a crucial point for which ethical considerations have to play a role.

Ethics in relation to the RP system is also about considering and recognizing the limits of the system when it comes to providing a rationale for societal justification of a radiation risk.

In the medical field there is a real challenge for the practice: links to professional standards and professional excellence have to be reinforced.
Problems with Justification

- Major knowledge issues
- Evidence issues
- Accountability issues
- Probably legal issues
- How it would be viewed by society.

(The fact that everybody is doing it is not a good defence if the position is not defensible)
---- and how to justify will differ -----
Baltimore medical discussion

• Is it ethical to have different limits for different professions? If so, can we allow professions to set their own limits (perhaps as long as an “upper bound” limit is not exceeded)?

• Could evacuation be voluntary in an emergency situation, i.e. could evacuees choose their own action level? What about early return to an evacuated area? Could people choose their own risk level for returning to their homes?

• Use of informed consent would add flexibility to the RP system
Ethical responsibility in the medical application of ionizing radiation means to view the well-being of the patient!

But

What about the communication with and reconnaissance of the patient or person concerned?

The dimensions of culture and ethics in the implementation of the radiation protection principles (justification, optimization, limitation) are remarkably visible in the medical area.
Radiation Protection Culture

RP Culture Project commenced at IRPA12 in 2008
Publication of Guidelines in 2014

IRPA is exploring the possibilities of developing more practical guidance started with the medical sector:

1st IRPA/IOMP/WHO workshop held in BA in April 2015 (IRPA)

„Radiation Protection Culture is a learned way of life.“
Radiation Protection Culture in Medicine

• The purpose: to capture the opinion and standpoint of safety culture in medicine and to identify ways to improve.

• Further 3 regional workshops open to all countries

  one meeting per continent will be organized,
  general presentations followed by work sessions in small groups and discussion

Geneva, Switzerland, at WHO headquarters on the 30th November,
Africa in 2016
Asia in 2017
The 1st IRPA/IOMP/WHO workshop on RP Culture in Medicine in Buenos Aires

68 people attended the workshop

Topics of discussion:

- the key components of radiation protection culture
- the current perspective on RP culture in medicine in South American countries
- current priorities for establishing a strong culture in medicine
Take home messages
WS Buenos Aires

Current situation in Latin America

• Different levels in RP inter-county, Inter-state, Inter-institution
• Lack of legislation
• Referring physician awareness
• Commitment:

“In our hospital we work as a team to ensure effective use of radiation and protect the patient and our staff”
Commitment / motivation
- Initial engagement of leaders, managers
- Cooperation between stakeholders

Standard levels of education / Common language/ Effective Communication

Awareness of risks (risk perception)

Blame-Free policy/Quality system implementation
- Reporting of incidents/errors
- Transparency (sharing information)
- Corrective action program

Leadership

Interdisciplinary
- Create different committees / forum
- Integration in safety procedures/systems

Accredited Experts Physicians

Financial resource
Second European Workshop Madrid
Main points

3 WG’s: Ethics in the medical sector (1)
Ethics in the nuclear sector (2)
Ethics and the future generation (3)

(1) • medical, occupational and public exposure
• ethical values and practical issues related to the implementation of the RP system in medicine

justification  3”A’s” appropriateness, awareness, audit
informed consent not a point but a process
dilemma between equity and precaution
(2)  

- **Workers dose**  
  - *The right to know rather than informed consent*  
  - *Efforts proportionate to the level of dose*  

- **RP culture**  
  - *Absolute alignment with ethical principles of dignity, transparency, autonomy*  

- **Stakeholder involvement**  
  - *Effective engagement and dialogue*  
  - *Particularly difficult: What is the risk?*  

- **Low dose and prudence**  
  - *Controlling doses at extremely low levels (regulatory pressure?)*
(3) • Radioactive waste management
  • *Crucial duty: transmit the means to the next generations to allow them to deal with the management of waste*

• Intellectual legacy
  • *Importance to consider historical decisions in the preparation of new strategies for the future*

• Compensation
  • *No real compensation for future generations ??*

• General discussion on ethical values of the RP system and future generation
  • *Dignity is crucial for the dialogue with the next generation*
Two closely related aspects:

Ethics in the Radiation Protection System

Ethics in application of the RP system by RP professionals

IRPA has a clear role in developing guiding principles on the ethics in application and behaviour of the professionals.
Communications/Communicators should:

• be clear and understandable in the **common language**
• facilitate **informed decisions** by institutions and individuals
• include **science, values** (ethical, social, political and cultural) and experience
• tell what we know but also what we don’t know
• be a resource to help people make informed decisions
• provide a service to different publics, groups and organizations
Risk communication and public understanding

- IRPA Executive Council
- Committee on Strategy and Practice
- Task Group on Public Understanding

- How should we present the uncertainty in risk estimation at low doses?
- Should we give more prominent context to natural background exposure?
- Whilst accepting the principle of dose limitation, should we have more flexibility in how this is emphasized and presented?
- Should we make ALARA even more central to our control hierarchy? If so, how do we ensure proportionality of efforts?
- Should we make effort to present radiation risk in the wider context of public health?

Reflection by AS‘s and their professionals
Ethics in Radiation Protection

FS-Workshop in cooperation with IRPA
(invitation to all European Societies)

31st August to 2nd September 2015 in Castle Böttstein/CH

„Radiation Protection Culture in Waste Management“

- Optimization in radioactive waste management: Dose reduction vs. Waste minimization
- Disposal asap vs. Long term interim storage
- Benefits and barriers by a graded approach for disposal of radioactive waste
IRPA invites you to work with us to address radiation protection challenges world wide.

IRPA provides a platform for wider discussion and enhancing awareness through our International and Regional Congresses:

14th IRPA International Congress
Cape Town, 9 – 13 May 2016
IRPA’s 50th Anniversary!