

TASK GROUP 109

Ethics in Radiological Protection for Medical Diagnosis and Treatment

Mandate

To develop an ICRP publication presenting the ethical aspects in the use of radiation in medicine:

- addressed to the radiological protection of patients,
- intended for medical professionals, patients, the public, and authorities.
- build upon Publication 138

Purpose of the Task Group's Report

1. Bridge the gap between the medical and RP communities in terms of ethics.

- build on Publication 138

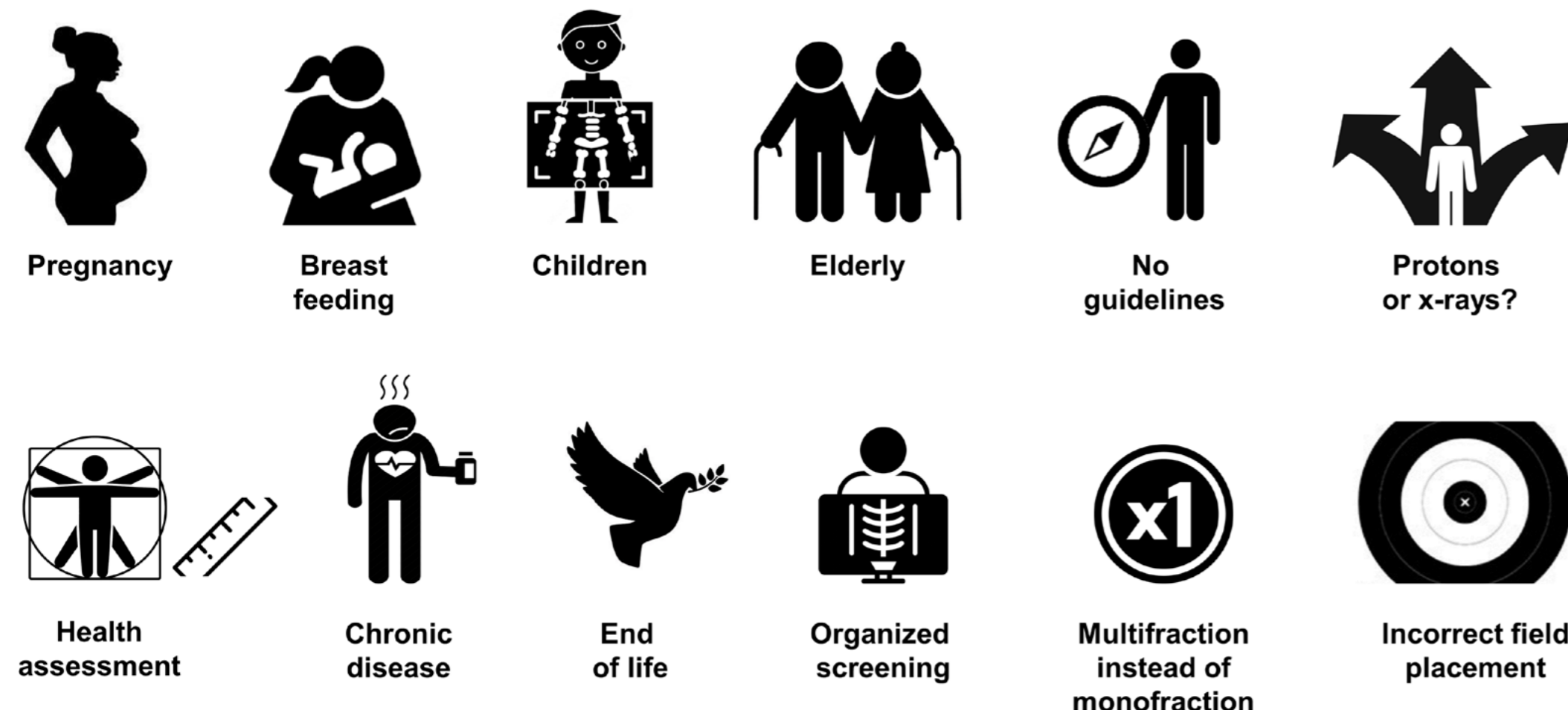
2. Propose an evaluation method to analyze specific situations from an ethical point of view.

3. Put the method into practice with 21 scenarios.

- 11 in imaging
- 10 in therapy

4. Integrating ethics into education & training.

Scenarios Covering Many Practical Situations



Example Scenario

Alpa Pennia (26y) was admitted to the emergency room of her hospital with a persistent headache following a bad fall. The doctor referred her for a brain CT examination and asked if she was pregnant. She responded positively and that she was in her first trimester. The information she received about the radiation risk made her question the need for this examination. After careful consideration, she consented to the procedure. Although it was not standard practice for this clinic, the technicians offered her lead contact shielding to cover her abdomen given her concerns.

Example Scenario

Six months later, she gives birth to a baby boy with a malformation of his forearm. She can't help but think that her CT caused of this malformation and returned to Radiology for advice. The radiologist told her that such an induced radiation effect was not possible. A year later, she still had doubts and so her son's paediatrician arranged a meeting with a medical physicist from another hospital for an independent opinion. Far from blaming the radiologists, Ms Pennia blamed herself for consenting to the CT scan.

She was convinced that the radiation received by her baby was considerable. Why else would they have used lead protection? The medical physicist explained to her that the dose to her foetus was very low as he was not directly in the x-ray beam at any time. The lead shielding was unnecessary and only used to reassure her that precautions were being taken. Such malformations can arise even with no radiation and the chances it was related to the CT scan were miniscule. He stated that if she had been his spouse, he certainly would have recommended that she accept the CT exam. Only then did she take the first step towards accepting the situation.

Suggestion of Answers

The medical staff were **transparent** about the **radiation risks** and **respected** the patient's dignity and autonomy without pressuring her to accept the CT exam. Faced with a worried patient, they showed **empathy** by offering **lead shielding** that was not recommended by their institutional guidelines

The staff acted with **caution**

	dignity/ autonomy	beneficence/ non-maleficence	prudence/ precaution	justice/ solidarity	transparency/ accountability/ honesty	inclusiveness/ empathy
Compliance	😊😊	😊😊	😊	—	—	😊😊
Non compliance	😞	😞	😞	—	😞	—

Offering **unnecessary protection** reinforced Ms Pennia in her belief that the radiation delivered to her child was considerable. The clinic's actions resulted the patient's **feeling of being alone** to bear the weight of the decision.

The staff might have **anticipated** the patient's **reaction**

The staff chose **not to tell** Ms Pennia (even after she gave birth) that the **lead shield** was only used to **mitigate her fear** of radiation although it seemed to have had the opposite effect.

Outline of Task Group's Report

1. Introduction and Goals
2. Ethics in Radiological Protection
3. Practical Developments in Biomedical Ethics
4. Medical Use of Radiation Relevant to Ethical Clinical Decision-making
5. Reviewing Practice from an Ethical Perspective
6. Case Based Examples in Diagnostics
7. Case Based Examples in Therapy
8. Education and Training in Ethics

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