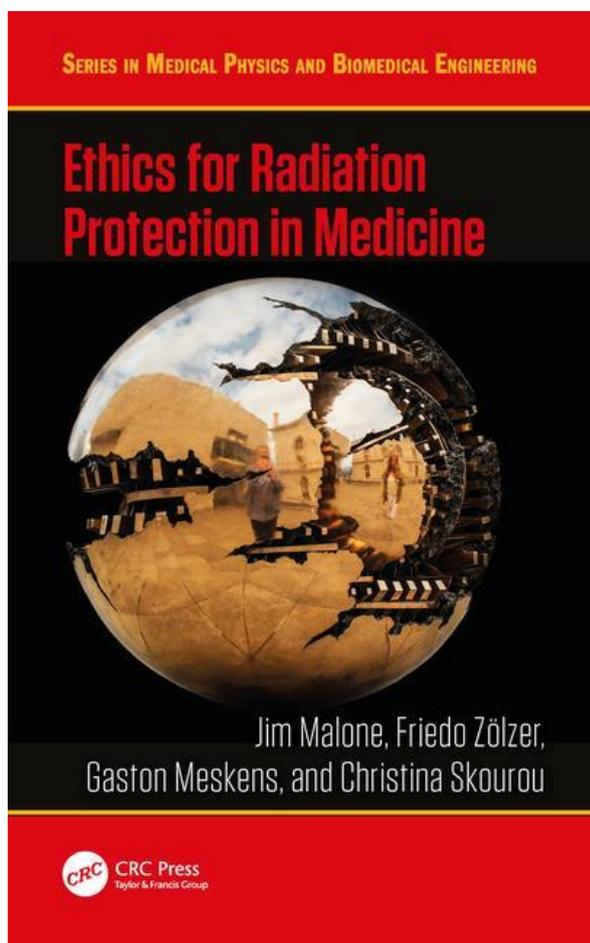


“ETHICS FOR RADIATION PROTECTION IN MEDICINE” : A BRIEF OVERVIEW

Kodlulovich, S^{1,2,3}

¹National Commission of Nuclear Energy, Brazil, ²President of FRALC (Federation of Radiation Protection in Latin America and Caribbean), ³ Chair IOMP Awards and Honours Committee

Abstract— This article is a brief review of the CRC textbook “Ethics for Radiation Protection in Medicine” by Jim Malone, Friedo Zölzer, Gaston Meskens and Christina Skourou, 2018, CRC Press (Series in Medical Physics and Biomedical Engineering), ISBN- 9781138553880



The theme of the book of Jim Malone, Friedo Zölzer, Gaston Meskens and Christina Skourou is very relevant and appropriated for the current moment of the society. Considering the important changes in the ethical framework and societal background, it is imperative to conduct an analysis of the radiological protection system which ICRP has been operating over the years.

Chapter 1 presents some areas of the society that are affecting these principles. Some aspects such as openness, accountability, transparency and honesty are described as the direction in which external pressures are applied. Other factors which can affect in decision making, overriding medical priorities and individual clinical decisions, are also described. It is well pointed out that the uncertainty to evaluate risk-benefits is still a concern among public and health professionals; however the public expectation is increasing with the constant improvement of the technologies and when something fails it can lead to distrust of the professionals.

Chapter 2 presents one very comprehensive comparison between ICRP core values set (beneficence, prudence, justice, dignity) and the procedural values (accountability, transparency and inclusiveness) with the principles of biomedical ethics (respect of autonomy, beneficence, non-maleficence, justice and prudence) and the ‘Pragmatic Value Set’ proposed by the authors in this book. Furthermore, a brief historical review of classical ethical theories which were the basis of ICRP principles, such as the utilitarianism, deontological ethics and communitarianism is presented. Another important subject discussed was the need of a cross-cultural approach and cross-cultural ethics and global approached.

Chapter 3 addressed the legal, professional, and ethical aspects of radiation protection that can make the ICRP system, medical ethics, and social expectations compatible. A brief explanation of the ICRP principles and factors such as uncertainty, communication, risk and problems with skeptic doctors are also discussed.

Regarding to regulatory framework for radiation protection, the authors pointed out that in general it relies on ICRP recommendations, but the structure and framework for implementation can differ. As an example, education and training requirements are present in almost all regulations but the dose-risk information of physician is still poor. It was also cited that the importance of radiation protection of the patient was more emphasized only in 2000, particularly in diagnostic imaging. After “The Bohn Call for Action” justification was established as a priority. A brief discussion about the three A’s (Awareness, Appropriateness and Audit) and the basic

concepts of radiation protection was included in this chapter.

Regarding the pragmatic set values, there is an expectation to guide the evaluation of medical uses of radiation. Especially now, that the alignment of ethical values underlying the practice of medicine and the ICRP's core principles has not been fully explored yet, this pragmatic value set can provide a good interim approach.

Chapters 4 and 5 lead the reader to ethical reflections. Also, applying the pragmatic set and a score system to evaluate different potential medical situations enables a better understanding of these pragmatic set values. The proposal of these values is to supplement the ICRP principles and complement them aiding decision making in social sensitive areas.

In Chapter 6, the set of values is extended to the following core values: Respect for autonomy, Non-maleficence, Beneficence and Justice; correlated values: Dignity, Precaution, Solidarity and Sustainability and Procedural Values: Inclusiveness, Accountability, Empathy and Transparency. Based on this complete set, the previous scenarios are reevaluated and verified if the original pragmatic set with only five values could be sufficient. Certainly, is not a unique solution for every possible ethical dilemma, and additional values maybe could be useful for more complex situations.

Chapter 7 led to a reflection on uncertainty, risk and fairness, including the risk-Inherent technology, from an ethics perspective, justifying risk and the idea of intellectual solidarity and of fair risk governance. When the pragmatic set is analyzed in real perplexing problems, knowledge-related uncertainties and value judgments should be taken into account. In justifying risk, the authors considered:

- A) Risk-Inherent Practice Acceptable? (Knowledge-based and assessment);
- B) Uncertainty (incomplete and speculative knowledge);
- C) Value-Based Assessment Dissent 'moral pluralism' (Governance by deliberation) and Consent 'shared values' (Governance by pacification).

It is also observed the importance of dealing fairly with the complexity of risk governance in medical uses of radiation. It requires joint preparedness of all concerned to adopt a specific responsible attitude.

In addition, is discussed the ethics of care perspective with reflexivity, and intellectual solidarity as ethical virtues which requires connectedness, vulnerability, and a sense of engagement.

The values proposed do not concern health care professionals only but for everyone involved in complex matters.

The pragmatic values set proposed did not intend to be a procedure for decision making, especially because there is no plausible framework that can produce determined solution for all potential cases. However, it seems that it could be a good tool to motivate a dialogue among all who contribute to radiation protection of patients and can be a good approach of ethical values that should be applied in radiation protection.

In 182 pages and 32 very explicative Tables, the authors bring to us a very comprehensive discussion about ethics for radiation protection in medicine. The complex subject matter addressed in this book is certainly of interest to all health professionals as well as all professionals who are directly or indirectly involved in processes or activities that may affect radiological protection in medicine.