

ICRP: A century of governance and ethics for radiation protection in medicine

'All professions are conspiracies against the laity' (George Bernard Shaw in The Doctor's Dilemma)

Professor Jim Malone
Trinity College Dublin

Medical RP

- Governance etc.
- Dose Limit and Med
- Attention to Med
- Ethics & Benefit/Harm



Governance & Independence

- Foundation Document: IRXRP, 3.5 pages later clarifications
- Issued: ICR (IEC)
- Mainly for staff
- **INDEPENDENT?**

Independence of Commission, Appointments and Governance

*ICRP [selects] from nominations --
-[by] National Delegations to the
ICR and by ICRP itself. The
selections shall be subject to
approval by the International
Executive Committee (IEC) of the
Congress. Members --- shall be
chosen from ---- fields of medical
radiology, radiation protection,
physics, health physics, biology,
genetics, biochemistry and
biophysics, -----.* The membership
of the ICRP shall be approved
during each International Congress

Dose Limit and Medical Exposures

On the side-line

- Independence??
- *Attention deficit in dealing with Medical*

Medical Exposures

- Rigorous discussion absent in Recommendations
- ICRP-1 (1959)
Medical Exposures excluded (a matter of practical necessity)
- Not since rigorously reviewed openly and transparently
- Comments on Justification and Optimisation
- *Prescribing model including hard limits on pharma doses*

Medical: Lack of Focus (Recommendations)

Year	Total Pages	Medical Pages
1928	3.5	Mention
1959 (ICRP-1)	22	0.5
1977 (ICRP-26)	~130	2.5
1990 (ICRP-60)	~190	1
2007 (ICRP-103)	~320	8

Recommendations:

- Status of Recommendations
- Numerous reports/ interim reports of varying quality/ relevance
- Side-line problems in:
 - Justification & Optimisation
 - Pregnant patients (timid?)
 - Regulator reticence (contagious)
 - Dose Limit exemption
- Many other deficits:
 - Poor engagement with Hu/SS
 - Use of the Sievert (SODS, x2)
 - Et al, et al

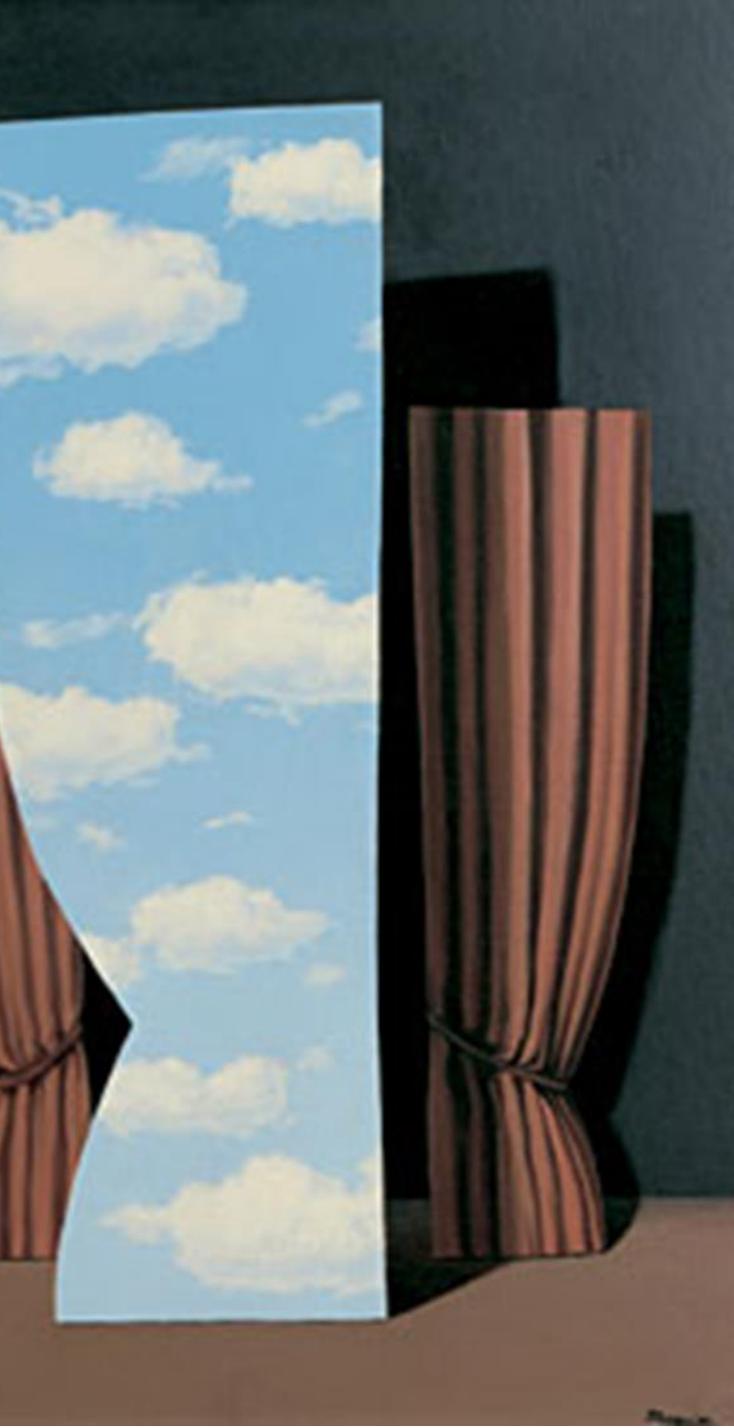


Ethics and Benefits/Harms

- ICRP 138 and TG 109
- Inadequate attention/respect to the rich culture, literature, and heritage of medical ethics
- Culture Change: WHO
- Culture Change: Society moved on

More Benefit than Harm?

- Quantitation Fallacy (one exception)
- Lens of Ethics (identify and assess)
- Definition of both much too narrow
- Respect the uncertainty



Things that MIGHT be done

- Revise nomination and appointment processes to the Commission
- Rename one of the Sieverts (e.g.: The Clement)
- Critically review the dose limit exemption
- Serious RECOMMENDATIONS about
 - Justification
 - Optimisation
 - Pregnant patients in both imaging and therapy
 - Ethics (Medical) as an integral component of RP
- Benefits and Harms
 - ✓ Acknowledge the quantitation illusion
 - ✓ Expand the definitions of both
 - ✓ Respect uncertainty, don't just resent it
 - ✓ *Ethics as a lens for both*
 - ✓ Consider the pharma approach
- Many Medical Reports might be done in universities or research institutes?



Malone J. X-rays for medical imaging: Radiation protection, governance and ethics over 125 years. *Physica Medica: European Journal of Medical Physics*. 2020 (79) 47-64. <https://doi.org/10.1016/j.ejmp.2020.09.012> or at https://www.researchgate.net/publication/345314438_Xrays_for_medical_imaging_Radiation_protection_governance_and_ethics_over_125_years

