



Ethics and Clinical Radiology

Contexts of RPoP Explored



Professor Jim Malone
Trinity College, Dublin
jfmalone@tcd.ie

Overview

1. General on Context
2. Ethics Background/Application
3. Social and Medical Context
4. Justification
5. Particular/Special Issues
6. Conclusions



1. Context and Success

- Suggest a wild party to ⇒
- Research on Cicero in 2012
- Issues about *dose*
- Issues about *risk*
- Regulation, standards and guidelines have fallen behind industrial, clinical developments
- Hazards have been underpriced (Chomsky)



Vilhelm Hammershoi

Medical Exposures

Background: 3.1 mSv



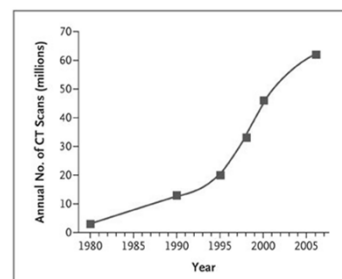
Medical

0.4 mSv, 2000

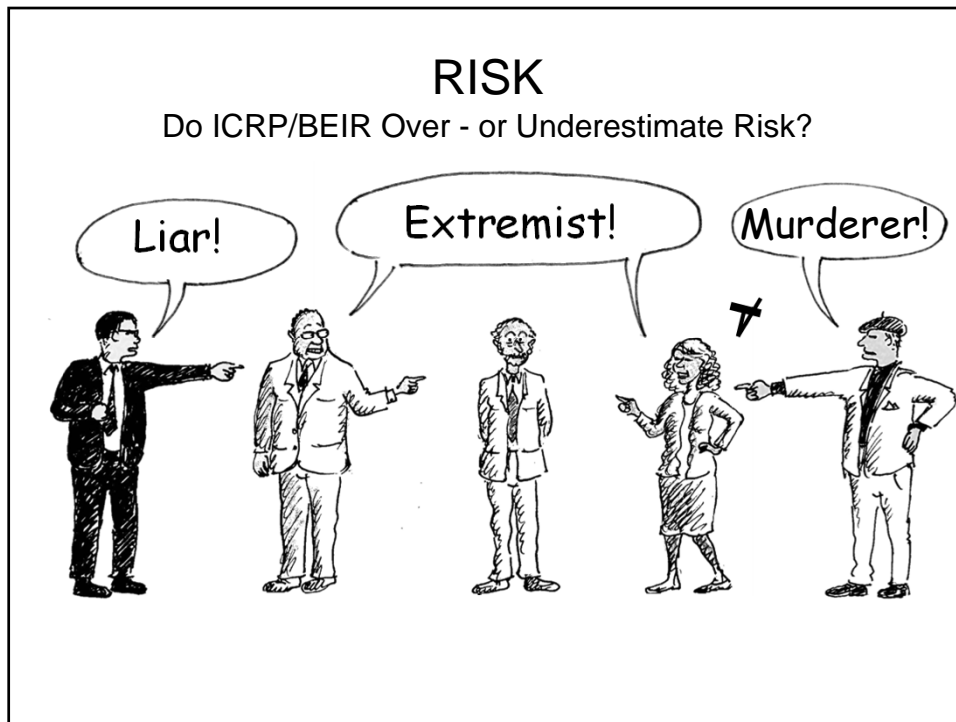
-----About 1½ to 2 percent of all cancers in the US may in future may be due to the radiation from today's CT scans. *NCRP, NEMJ, and ABR Summit Review*



Medical 3 mSv, 2009



UNSCEAR 2009, and NCRP, 160, 2009



2. Ethics and Background

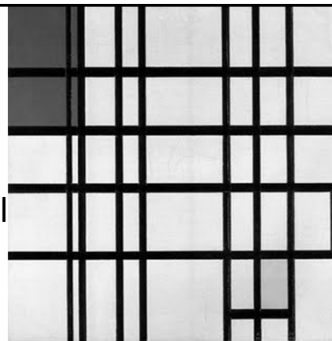
- IAEA/EC Consultations
- NEA/OECD, ICRP, IRPA
- Consider in the context of:
 - The Agent
 - The Act
 - The Recipient
- Ethics 101 helps when the discipline has been neglected
- Overlooked in stressful and busy technically excellent (but industrialised) practice

Ethics is?

- Essentially practical:
What ought I be doing now? Patients? Staff?
- Obligations are very ordinary and numerous
- Situations are complex
- Normally what can be done is distinct from what ought to be done
- Any facts will matter sometimes
- Utilitarian/Rights based approaches
- From within Profession informed by heritage
- Complex Situations involving value judgments and science, medicine or engineering

Four Neglected Values

- Autonomy and Dignity of Individual
- Non Maleficance (Do no harm)
Beneficance, (Do good; justice, access etc)
- Prudential/Cautious Principle (Pascal's Wager)
- Openness, Transparency and Accountability (to patient and public)



Application of Ethical Background

Autonomy and Dignity

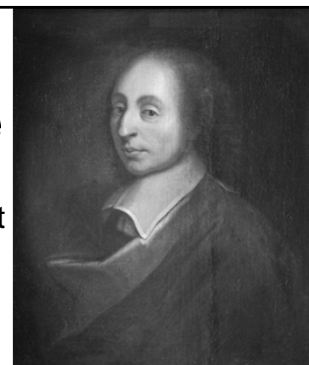
- Non negotiable that the patient be told
 - what is going to be done,
 - why it is being done,
 - what will happen as a result (including risks),
 - what will happen if it is not done,
 - what else, if anything, can be done instead, i.e. what the alternatives are
- Information and Consent not part of deal

Do no Harm

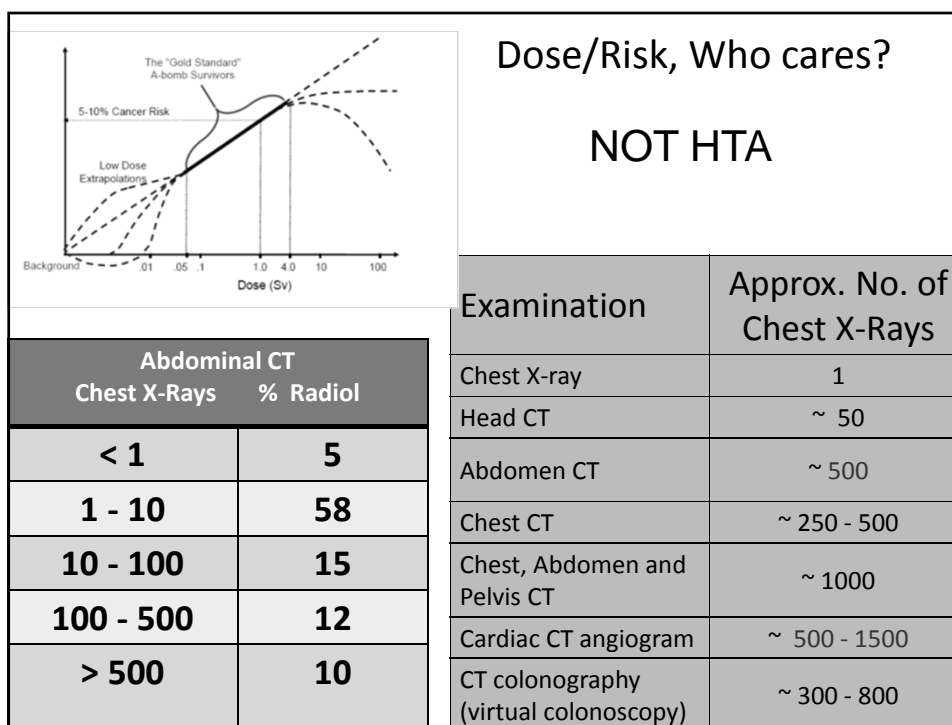
- Doctors' Knowledge
- Dose, Risk, Uncertainty and The Sceptical Doctor
- Depersonalisation and industrialisation of practice (Size Matters)
- Ethics and HTA_(Health Technology Assessment)

Precautionary Principle

- Eastern and Western traditions respect it
- Behaviour without the full knowledge
- Bet there is no risk and it turns out that there is one, I can only have regrets
- Bet there is a risk and it turns out that there is no risk, I have no regrets
- Prudence minimizes regrets



Jacques Loeb,
CEPN



So what are we dealing with?

uncertainty

sensitivity

Different levels
of effect

complexity

redundancy

randomness

C
O
N
F
U
S
I
O
N

Brian Friel

- ---- *But remember that words are signals -----.*
And it can happen – to use an image you'll understand – it can happen that a civilization can be imprisoned in a linguistic contour which no longer matches the landscape of --- fact

Confusion is not an ignoble condition

3. Social and Medical Context

Popular Discourse

- Immense Technical Success and Social Failures.
- Medicine as a consumer led activity
- Medical practice can be weak on Openness, Transparency and Accountability
- Also expected in medical practice
- Driver for these not primarily economic
- Distrust of Authority, Paternalism, Collapsing, Self-Regulation;
- Organ Retention, Blood, Foetal Tissue, Organ Donor, and Infection Scandals.
- Rationing/inequity



Scandals

- **Desensitisation** of professions to public concerns
- **Overutilization** overlooking safety, ethics, HTA, moral sense
- **Loyalty to Profession**
- **Group Think**

When things go wrong

- Peer Review
- Professional Bodies (eg Medical Council)
- Tribunal to determine the facts: **A DAWN RAID**



4. Justification

- Concept purposeful ? Lutheran?
- Low recognition in medicine
- Implementation steeped in paternalism, w poor regulation.
- 130 Hospital Doctors
- 33% child exams unnecessary
- ~50% physicians in two UK centres
- ~ 75% of low back examinations
- WHO estimates 50% of all treatments inappropriate.



Justification of Medical
Exposure in Diagnostic Imaging

*There is significant
and systemic practice
of inappropriate
Examination in
radiology.*

Medical Imaging Bubble

- **Problem global and regional**

- **The 3 A's**

- **Awareness**
- **Appropriateness**
- **Audit**

- -----About 1½ to 2 percent of all cancers in the US may in future may be due to the radiation from today's CT scans. *NCRP, NEMJ, and ABR Summit Review*

5. Particular/Special Issues

- Non Medical Exposures
- Regulatory Framework
- Pregnancy
- Worried well and Screening Programmes
- Tallaght Problem

Non Medical Exposures

- Weapons or Drugs Search
- Suspicion of Child Abuse
- Sports medicine (Predictive/Preventative)
- Insurance
- Age Assessment
- Vehicle inspection
- Civil Litigation
- Immigration
- Emigration
- Prisoners
- Pre-employment

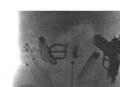
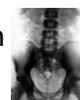


Image Gently, Image Wisely Choose Wisely



Excessive use, poor technique and public perceptions

- Paediatric and adult
- Advice for patients, parents and public
- Technique and communication advice for professionals

Choose Wisely

- 9 Specialties
- 5 unnecessary interventions in each, commonly used, but not needed
- 27/45 (60%) were imaging

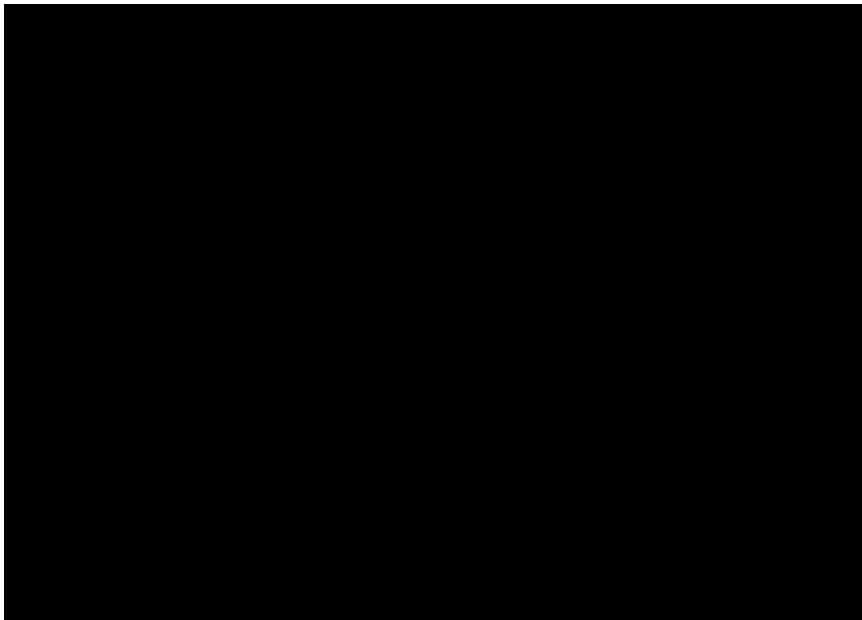
Both Health Economics and HTA driven with Little ref to ethics


6. Conclusions

- Lot of Ethical Dilemmas
- Global and HTA dominates
- Helpful to consider 4 headline issues
- Numerous examples of practical issues in radiology
- Time ripe for substantial ethical contribution that will be much richer than HTA



Medicalisation and overtreatment feature in Damien Hirst's work





- **A: Appropriateness**
- **A: Awareness**
- **A: Audit**
- **Transparency and Accountability**

**We have lived through
an Imaging Bubble**

The 3 A's

Last Temptation: Doing right thing for wrong reason
Naom Chomsky: "Ignoring Externalities" and
"Underpricing Risk"

British Medical Journal (14 April 2012)

Medicalisation and overtreatment have long been a feature of artist Damien Hirst's work

- Obsession with medicines replaced God/Religion
- Instruction/advice, from on high, on how to live
- Pharma products (like religion) attractively packaged and potentially lethal
- For Hirst, medicine and pharmacy, like art, provides a belief system which is both seductive and deceptive.



Damien Hirst