HERCA: Heads of the European Radiological protection Competent Authorities

1st European Inspection Workshop
Brussels 6-8 October 2015

How to inspect in a clinical environment

Steve Ebden-Jackson
HERCA Working Group Medical Applications

HERCA WGMA Inspection Workshop 2015

Medical Practices – are important
- More people are exposed to ionising radiation from medical exposures than from any other human activity
- Individual doses and increasingly population doses are higher from medical exposures than any other activity or exposure source
- Medical exposures result in exposures to the individual undergoing the procedure, those undertaking the procedure and members of the public

HERCA WGMA Inspection Workshop 2015

Medical Exposures – are different
- Medical exposures involve the deliberate direct exposure to ionising radiation of an individual
- In radiotherapy, exposure of patients to large quantities of ionising radiation is required – dose control is required rather than dose limitation

HERCA WGMA Inspection Workshop 2015

Medical Practices – have different frameworks
- Medical exposures of individuals (eg patients) do not adhere to the framework provided by dose limits and dose constraints
- Medical exposures of patients might be likened to emergency exposures – there is limited control of the situation – AND WE DO NOT INSPECT EMERGENCY EXPOSURES
- But dose limits and dose constraints do apply to members of the public and those occupationally exposed from medical exposures

HERCA WGMA Inspection Workshop 2015

Medical Exposures – are complex
- Justification is required at three levels – general, type of practice, individual – unique …...but inspected at one
- Optimisation is required at two levels – design and construction of equipment and installation working procedures – ? the more important of the two …...and inspected at both
- NB optimisation does not have to mean dose reduction
HERCA WG Medical Applications

Medical Exposures – Inspection requirements
• understanding of radiation protection at a range of dose levels and dose rates within one type of practice
• acknowledgement of the intention to do more good than harm for the patient, for whom the greatest risk is often not ionising radiation (eg trauma, disease)
• balancing the immediate needs of the patient against the protection of the staff and public

HERCA WG Medical Applications

Medical Exposures – Inspection requirements
• understanding and/or appreciation to some level of clinical practice and the variations introduced by patients in very different circumstances
  - for justification
  - for optimisation
• acceptance of limitations of one’s own knowledge
• realism regarding the implications of enforcement action
• training implications outside radiation protection

HERCA WG Medical Applications

Medical Exposures – Imperatives
• maintain credibility in a field not known for being forgiving of others
• maintain position of authority – even if the doctor is God
• maintain status of the expert with regard to the detail and application of the regulations to medical exposures

Thank you for your attention!

HERCA: Heads of the European Radiological Protection Competent Authorities