

1st European Inspection Workshop
HERCA MedInspector 2015

Working group 2 - optimization



Optimisation: General issues

- Definition – what is optimisation?
 - Optimisation of protection
 - Actual process of weighing image quality and patient dose
 - Dose limiting tools / techniques
- Optimisation is generally part of inspection
 - Should include patient as well as staff
- If patient and staff are not covered by the same authority
 - Good cooperation is encouraged

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Optimisation: General issues, cont.

- Elements in inspection
 - Following a few procedures – especially beneficial in interventional radiology (therapy and diagnosis)
 - Interviews
 - Documentation
 - Measurements included by some countries
- Focus of inspection
 - Compliance with requirements
 - Good if the inspected department also sees benefit from inspection

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Optimization: Inspector training

- Quite diverse training programs
 - Formalized
 - Non-formalized
- Clinical experience is an advantage
- Apprenticeship with experienced inspector should be included

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Optimisation: Examination protocols

- Availability of examination protocols should be included
 - Manufacturer protocols need local optimisation!
- Documented procedures for updating of protocols
 - Who can do it?
 - Who can approve it?
- Is exposure index used by staff?
- Optimisation of staff protection should be included
- Paediatric protocols
 - Children are NOT small adults!

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Optimisation: DRLs

- National DRLs are established
 - In general based on national surveys
 - Update could be improved in some countries
- Review of documentation for local standard doses should be included in inspection
 - If doses are higher than DRLs: The hospital should explain + plan for improvement
- Large potential for improving understanding of DRLs in different professions
 - Limiting factor for the correct /appropriate use of DRL's
 - Further education needed !!

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Optimisation: Dose limiting tools/techniques

- Check availability and use
 - Patient positioning techniques
 - Exposure factors
 - Collimation
 - Virtual collimation
 - Pulsed fluoroscopy (pulse rate)
 - Multiple projection angles
 - Last image hold
- Intention in requirements should be recognised
 - If presence of a tool is required ⇒ it should be used!

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Optimisation: Training of staff

- Practical training (optimisation tools) should be provided for:
 - Surgeons
 - Neurologists
 - Cardiologists
- Should be targeted for these groups – clinical perspective
- CPD encouraged
- Provider of training:
 - Specific equipment: vendor
 - RP aspects: multi-disciplinary team

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Optimisation

- Good practices
 - Following actual procedures – see the practical implementation
- Limiting factors
 - Understanding of the concept of optimisation, especially DRLs, is limited



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