

Summary and closing remarks of

1st European Inspection Workshop HERCA MedInspector 2015

How to inspect justification and optimization in diagnostic radiology

Eva G. Friberg – 6-8th of October 2015 – HERCA Inspection Workshop, Brussels

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Summary

- Justification and optimization – two of the fundamental principles of radiation protection (ICRP)
 - To be carried out for every individual exposure (BSS)
- Regulatory bodies have an important role in promoting and ensuring that justification and optimization is properly implemented at medical imaging facilities
- Inspecting implementation of justification and optimization is an important task for regulatory bodies

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Regulatory framework

- The perfect world – Lala-land
 - Truly independent regulatory body – reports directly to government – power to make legislation
 - One regulatory body – cover all sectors and areas – sufficient resources – clear regulatory framework – proper stakeholder involvement
 - Cover comprehensive range of activities – comprehensive training packet for staff - strategic plan- risk based inspections – multi disciplinary inspection team in medical use of radiation
- The real world (based on three presentations)
 - Not all are truly independent, not all cover all sectors and areas, not all have sufficient resources, not all have multidisciplinary inspections team
 - To conclude: there is potential for improvements in the regulatory frameworks across Europe

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Ways to inspect - effectiveness

- Different ways to inspect across Europe
 - Measurements on equipment
 - Large county reviews (document review, interviews, observations, et
 - Thematic inspections like cardiology departments
 - Make use of clinical audit reports
 - Some thing between
- Different methods have different kind of values
- Inspect QM-system based on the Plan – Do – Check – Act wheel, with emphasis on Check – Act part
- To obtain a graded approach in inspections they should be connected to risk-assessments (incl. public risk perception)
 - If regulations in followed, use should be within acceptable risk (safe)

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Inspections in clinical environments

- Medical exposure is different from other situations
 - Directly expose and individual by purpose
 - No dose limits/constraints (though DRLs)
- Medical exposure is complex
 - Justification in 3 levels, optimization
- Important to understand the term: doing more good than harm
 - Inspector must have some clinical understanding/practice to fully understand the big picture of medical exposure
- Maintain credibility, position of authority, expert on regulations
- If possible, make use of advisories on inspections

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Inspector competence

- Brief review of the UK-inspector training program
 - Training courses can be provided for interested inspectors – but for a fee
- Inspection workshops (Nordic) give valuable insight in different countries inspection programs and methods, area for discussions and networking
- Inspection exchange is solely positive – identify good practices to take home
- EUTEMPE-RX courses for physicists in radiology
 - Inspectors are welcomed
- Take home message:
 - Arrange inspection workshops and inspector exchange among countries with no language barrier

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Approaches for inspecting justification

- Crucial to know the regulatory framework on justification
- All inspectors can inspect if justification is present to some extent regardless of knowledge in radiology
 - Content of referral, referral guidelines, information to patient
- Inspect the role of the referrer, receptionist, radiographer and radiological practitioner
 - Referral, right patient, image history, guideline conformity, pregnancy
- General attitude is important and difficult to change

Approaches for inspecting optimization

- Optimization is the correct balance between dose and image quality
 - Many factors influence the process of optimization
- Huge optimization potential in radiology
- DRLs and standard doses are an efficient tool in the optimization process if the concept is fully understood and use correctly
- DRL is not a regulatory tool but a tool for optimization and benchmarking
- Inspections of cardiology departments in Norway resulted in reduces doses to patients and staff
 - Useful to evaluate inspections – inspections is an effective tool

HERCA Inspection Workshop – 2015

We hope to have provide you with a platform to

- Meet other European inspectors
- Exchange practical ideas and experiences
- Identified good inspection practice to take home
- Identify areas of improvements
- Create contact for further discussion and cooperation



Way forward

- Summarize identified **good practises** and challenges by the working groups
- Produce **recommendations** on the practical inspection of justification and optimization within diagnostic radiology
- Provide participants with a good **tool-kit** to implement identified good practices at home
- All presentations and results from working groups will be made available on HERCA web-page
- Please contribute to the evaluation of the workshop

Acknowledgement

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- **Core group**
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 - Steve Ebdon-Jackson (UK)
 - Torsten Cederlund (Sweden)
 - Richard Elek (Hungary)
 - Maria Kalathaki (Greece)
- **Participants**
 - Contribution to discussion and working groups



THANK YOU ALL!!!

