1st European Inspection Workshop

HERCA MedInspector 2015

Working group template on optimization

FANC federal agency for nuclear control

HERCA Heads of the European Radiological protection Competent Authorities

Optimisation: General issues

- To what extent is optimization part of the inspection process?
  - What is in focus of the inspection (compliance with requirements, guidance, information, identification of good practice, other?)
  - Elements of the inspections (interviews, observations, review of documentation, measurements, other)?
  - Process of optimization explicitly covered in QA-system?
- Is a proper risk assessment performed (patient and staff)?
- Does the inspection cover both patient and staff?
- Are patient and occupational RP covered by the same authority
  - If not, is there any cooperation and how?

Optimization: Inspector training

- What is the competence (training and skills) of the inspectors in order to be able to inspect the process of optimization?
  - Professional background?
  - Clinical experience?
  - Training of inspectors, formal training program, others?
- Is the competence of the inspectors adequate in order to provide clinical assessment of optimization of practical aspects?

Optimisation: Examination protocols

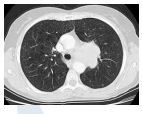
- Do you inspect the availability of examination protocols?
- Are paediatric protocols developed and used? Do you evaluate them?
  - Use of grid, AEC, others?
- Are these protocols used as provided by the manufacturer or further optimised?
- Are procedures in place for updating these protocols when necessary?
- Are the optimization of procedures performed by a multi-disciplinary team?
  - Dose optimization of the staff considered?

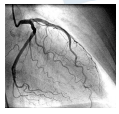
Optimisation: DRLs

- Are national DRLs established for common diagnostic examinations and interventional procedures?
  - If yes, based on national surveys, level of revision?
  - If not, use of European DRLs, others?
- Are local standard doses established and compared to national DRLs?
  - Local procedures on establishment and revision?
  - Local review and corrective actions if deviations from national DRLs?
  - Used actively as a tool for optimization (not only as regulatory tool)?
  - Used as a tool for education and training of staff
- Are the associated professionals (radiological practitioners, radiographers) aware of the concept of DRLs and how to implement them in clinical practice?

Optimisation: Dose limiting tools/technique

- Are dose limiting tools of X-ray equipment available and in use (CT, interventional, other)?
- Are dose limiting techniques (compression, projection, shielding, etc.) in use?
- Are the associated professionals using these systems aware of and trained in the use of these dose limiting tools?





Optimisation: Training of staff

- Is the education and training of the staff assessed during inspections?
  - Education and training records reviewed?
  - General training in RP and safe use of radiation?
  - Equipment specific training including RP issues?
  - Who is providing the training (medical physicist, vendor, others?)
- Is the level of knowledge in RP and use of equipment assessed/checked during the inspection (by interviews)

Optimisation: Equipment and QC

- Are equipment CE-marked and suitable for intended use?
  - Provided with necessary protective devices (interventional radiology)
- Are user manuals available in proper language?
- Are patient doses part of the radiological report?
  - If yes, manually or automatic reported?
- Are frequently QC performed and deviations followed up?
  - Availability of acceptability criteria (like RP 162), local/national?
  - Are the results of the QC tests checked and evaluated during inspections?
  - Are QC tests performed based on national protocols?
  - Are the calibration of QC equipment evaluated?
  - Involvement of a medical physicist evaluated?

Optimisation: Occupational issues

- Are risk assessment for staff performed
  - Provided with necessary protective devices (interventional radiology)
- Are proper protective gear available and in use?
  - Any special attention to pregnant staff?
- Are the workplace proper classified and marked?
- Are the use of personal dosimetry inspected and evaluated?
  - Effective dose, eye lens dose, extremity dose?
- Are high staff doses reviewed and followed up by corrective actions?
- Are working techniques observed during the inspection?

Optimisation

- Identify good practices, limiting factors (e.g. economical, human resources, competence etc) and challenges