

Feedback on the FANC inspection campaign “medical physics department”

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Health Protection

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Outline

- Regulatory context
- Aim
- Practical approach
- Most important findings and observations
- Conclusion

Context of the inspection campaign

April 19, 2018 — Law amending the FANC-law of April 15, 1994

➤ Art. 27bis

“The licence holder of an establishment with medical radiological installations must establish a medical physics department in charge of organising medical physics within the establishment”

Not applicable to Class III establishments unless they have CT or interventional radiology

Decree of February 13, 2020 on medical exposures

➤ Transition period (graded approach):

- October first, 2021: medical establishments with installations for radiotherapy
- February 20, 2023: all other concerned medical establishments

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Aim of the inspection campaign

To examine:

- the creation, structure and organisation of the medical physics department
- the statute and responsibilities of the head of the medical physics department
- the procedures regarding the organisation and functioning of the medical physics department
- the organisation of the medical radiation physics in the three domains of competence: radiotherapy, nuclear medicine and radiology

Approach of the inspection campaign

Format of the inspections :

- Announced, well in advance
- On site
- 2 or 3 nuclear inspectors (theme coordinators RT, NM and RX)
- In required presence of:
 - (Future) Head of the medical physics department
 - License holder of the establishment or his/hers representative
- 10 establishments with a recognised radiotherapy department:
 - 5 Flanders
 - 3 Wallonia
 - 2 Brussels

Approach of the inspection campaign

Format of the inspections:

- First phase: March 2022
 - Announcement of the inspection (mail + letter)
 - Questionnaire
 - Supporting documents/procedures
- Second phase: April 2022
 - Analysis received information and documents by the nuclear inspectors
 - Preparation of the inspections, to allow for a smooth and efficient process on site

Approach of the inspection campaign

Format of the inspections:

- Third phase: May 2022 – September 2022
 - Inspections
 - Inspection reports with an overview of:
 - ✓ **identified shortcomings**
 - ✓ **defined action points and deadlines**
 - ✓ **observed good practices**
- Closing phase (ongoing):
 - Analysis of the received answers

Findings and observations

With regard to the creation, organisation and structure of the medical physics department:

- 5/10:
 - ✓ Medical physics department up and running
 - ✓ Head officially designated by the license holder or board of directors
- Organisational chart of the medical physics department:
 - ✓ 4/5 hierarchical link between the head and the license holder and between the head and the internal MPE's and MPA's
- Points of attention:
 - ✓ No visualisation of the external MPE's in RX and NM in the organisational chart
 - ✓ No visualisation of the position of the department within the establishment in the chart
 - ✓ No formal procedure or description of the medical physics department

Findings and observations

With regard to the statute and tasks of the head of the medical physics department:

- 5/10: official job description, approved by the license holder or board of directors
- Time allocation: 20% to 50% FTE, subject to internal evaluation by the head and his/her N+1 after a certain amount of time
- 4/5: head = internal MPE recognised in radiotherapy
- 1/5: head = internal MPE recognised in radiology
- Points of attention:
 - ✓ No access for the head and/or MPE's to the documentation system of the health physics service
 - ✓ Often multiple archiving systems for the medical physics reports

Findings and observations

With regard to the statute and tasks of the head of the medical physics department:

- Point of attention:
 - No or little structured communication with the chief medical officer and medical heads , in particular those of the departments with less medical physics tradition like cardiology, urology, the pain clinic, ...
- Good practice: creation of an internal Radiation Safety Committee
 - ✓ Medical Director, head of medical physics department, head of the health physics department and medical heads of the departments with medical radiological installations
 - ✓ Topics related to radiation protection, medical physics, follow-up of the equipment, ...
 - ✓ Future: continual education activities
 - ✓ Radiation protection awareness process beyond the establishment sites and medical departments

Findings and observations

With regard to the organisation of medical physics in radiotherapy:

- Point of attention:
 - Permanence MPE during external irradiations, on all sites (satellite sites included)
 - ✓ No sufficient MPE staffing in the radiotherapy department
 - ✓ Shortage of MPE's on the job market (2 RT-departments had a vacancy for a MPE)
 - ✓ In September 2022: 11 new recognitions MPE in RT
- Good practice:
 - ✓ On-call service of MPE's to ensure permanence in case of illness, force majeure, ...

Findings and observations

With regard to the organisation of medical physics in nuclear medicine

- Points of attention:
 - On-call service for the MPE not established or short-staffed (illness or holidays)
 - No list present in the NM department of types of breakdowns, maintenance and modifications of the medical radiological equipment of which the MPE must be notified so that he/she can assess if a total or partial QC is necessary
 - ✓ list is based on the possible influence on patient dose and/or image quality
 - ✓ no QC and no formal release of the equipment

Findings and observations

With regard to the organisation of medical physics in radiology

- Points of attention:
 - No list present in the medical imaging department and/or in the connected departments of types of breakdowns, maintenance and modifications of the medical radiological equipment for which the MPE in RX must be notified so that he/she can assess if a total or partial QC is necessary
 - ✓ possible influence on patient dose and/or image quality
 - ✓ no QC and no formal release of the equipment
 - Oral arrangements but no formal procedure on who should be informed, when and how, of a breakdown, maintenance or modification of the equipment
 - No or very little monitoring and follow-up of the medical radiological equipment in the departments with X-ray equipment and less tradition with medical physics

Findings and observations

With regard to the organisation of medical physics in radiology

- Good practice:
 - External MPE, recognised in RX : physically present in the hospital for 1 day/two weeks
 - Proper desk in the department of RT, close to the head of the medical physics department, which facilitates communication and collaboration
 - More involvement of the MPE in the purchase of new X-ray equipment, initiation of optimisation projects, the follow-up of the X-ray equipment in the concerned departments, ...

Conclusion

With regard to the inspection campaign

- Of great interest, for both parties
- Well received
- Great willingness to cooperate and to learn and correct
- Positive and constructive discussions
- Gratitude: contribution to a breakthrough/acceleration in the implementation of the medical physics department

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