



ETRAP

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Radiation protection education and training in Belgium: Challenges and opportunities

T. CLARIJS^{1,2}, P. KOCKEROLS¹, D. BERUS^{1,3}, S. COOLS^{1,4}

¹*Belgian Society for Radiation Protection BVS-ABR, Belgium*

²*Belgian Nuclear Research Centre SCK CEN, Mol, Belgium*

³*Vrije Universiteit Brussel VUB, Brussels, Belgium*

⁴*Vincotte NV, Vilvoorde, Belgium*



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- The Belgian Society for Radiation Protection
 - Education and training in radiation protection in Belgium
 - References and related activities



The Belgian Society for Radiation Protection

- Founded in 1963 (!), affiliated to IRPA
- About 400 members
- Activities:
 - Scientific lectures
 - (yearly) E&T event
 - Working groups (communication, RPO)
- Publications: Annals & advices
- Communication: website – newsletter – LinkedIn

<http://www.bvsabr.be>



RP Education and training in Belgium

- BVS-ABR offers a platform for networking and CPD*...
- E&T is essential for competence building and maintaining
- Two focus meetings on the E&T framework in Belgium
 - November 2022: professionals & workers in industry + first responders
 - May 2023: professionals & workers in medical
- **Scope:**
 - Initial training
 - Retraining and CPD
 - Framework and practical implementation
- **Bring:**
 - *Insight*
 - *Together*
 - *Good practice*

*continuous professional development



Main outline of the programmes

*Focus on the **industry & first responders***

- **Introduction – setting the scene** *by BVS-ABR*
- **Regulatory requirements regarding E&T** *by the competent authority*
- E&T for RPEs
- E&T for occupational health physicians
- E&T for RPOs
- *Key note: quality assurance of E&T in radiation protection → see Session 8 Friday*
- E&T for first responders (DG-advisors, firefighters, national crises centre)
- E&T for exposed workers and external workers



Main outline of the programmes *Focus on **healthcare professionals***

- **Introduction – setting the scene** *by BVS-ABR*
- **Regulatory requirements regarding E&T** *by the competent authority*
- E&T for nurses and technologists
- Practical organization of E&T for healthcare professionals in a hospital
- E&T for medical doctors
- E&T for medical physics experts
- E&T for dental practitioners
- E&T for and by the manufacturers/distributors of medical devices



Discussion E&T for professionals

RPE and occupational health physicians

- Not competence based: minimum number of hours + training topics
- RPE: Separate requirements for E&T in topics of technology and nuclear safety (but offer is lacking?)
- Occupational health physicians: very challenging to meet requirements. (lack of suitable internship for class I facilities, lack of suitable CPD initiatives) Call for a coherent approach.



- Since 2018: major update in regulation, including RPO
- Result: lots of training formats (& training providers)
- Points of attention in the training of RPO
 - E-learning vs online vs face-to-face training
 - Relevance to working environment & availability of practical tools
(procedures, contacts, checklists, references): RPE involvement needed!
 - Evaluation of competences: by training provider, by employer, by MPE?
 - CPD requirements are currently low



Discussion E&T for **first responders**

- Lack of framework and SAT* (who is the target audience?)
- **Advisors in dangerous goods:** more practical work related to radiation sources requested (case studies of existing incidents)
- Training initiatives for **fire fighters** surrounding (heavy) nuclear sites: good initiatives but lack of
 - CPD framework
 - Harmonized intervention procedures
 - Available information on (local) risks
- High level initiatives (e.g. CBRNe TTT**) do not reach lower (operational) levels
- Just-in-time training: feasible?

*systematic approach to training

** train-the-trainer



Discussion E&T for **exposed workers**

- How can training be made as efficient and effective as possible?
- How do we deal with e-learning?
- Do we need evaluation of training?
- How to retrain and not repeat?
- Some conclusions:
 - (at least) yearly frequency is needed
 - Mixed approach works well: theoretical, e-learning, simulation, OJT*, ...
 - External workers: similar approach is feasible

*on-the-job training



Discussion E&T for healthcare professionals **nurses and technologists**

- Since 2020 and after: huge upgrades in regulation for medical exposure
- Now: new proposal from FANC* with large impact on nurses
- Challenges:
 - Organisation of clinical internships
 - Modular approach of training (lack of training providers)
 - Overall study load for a target audience already under pressure

*(Belgian) Federal Agency for Nuclear Control



Discussion E&T for healthcare professionals

Medical doctors (in various disciplines)

- Initial training: well embedded in academic framework for nucmed, radiology and radio-oncology, but not for other disciplines using x-rays (fluoro)
- Challenges:
 - Rapid tech advances: CPD necessary with clinical relevance!
 - Large administrative burden to follow-up E&T status of healthcare professionals in a hospital environment (incoming staff, actual staff, mutating staff,...)
- But: requirements for RP E&T are perceived by the MDs as balanced and feasible, with ample offer for CPD.



Discussion E&T for healthcare professionals

Miscellaneous

- **Medical physics experts:** well established E&T framework, but challenge to meet all competences (e.g. involvement for equipment purchases).
- **Dentomaxillofacial radiology:** well established framework, but lack of practitioners (and difficult to have mutual recognition of qualifications of foreign dentists).
- **Manufacturers:** Now involvement is embedded in legislation, and mixed approaches are offered to end-users. Involvement of MPE and RPE?



- Effectivity of training? (competence based vs number of hours)
- (call for) pooling of resources to enable more quality (Trainers, reference training material, ...)
- Relevance towards role/tasks/responsibility is essential
- Involvement needed of
 - FANC (Updates in legislation)
 - Research/industry/manufacturers/distributors (technological/scientific updates)
- Role of the national society BVS-ABR



Useful information

Discover our website

- Legal obligations
- Providers
- Only in NL and FR

The screenshot shows the website interface with the following elements:

- Top navigation: EN | FR | NL | login
- Logo: BVSABR
- Main navigation: OVER BVS, ACTIVITEITEN, PUBLICATIES, RADIOACTIVITEIT, NUTTIGE INFORMATIE, Q
- Section: OPLEIDING IN STRALINGSBESCHERMING
- Sub-section: **Wettelijke verplichtingen**
- List of articles:
 - Beroepshalve blootgestelde werknemers (Artikel 25 ARBI S)
 - Medisch
 - Practici (Artikel 64 KB MED)
 - Gemachtigden (Artikel 85 KB MED)
 - Deskundige medische stralingsfysica (Artikel 88 KB MED)
 - Assistent medische stralingsfysica (Artikel 95-96 KB MED)
 - Arbeidsartsen (Artikel 75 ARBI S)
 - Radiofarmaceuten (Artikel 56 KB RADPROD)
 - Voorlichting medisch-radiologische uitrusting (Artikel 33 KB MED)
- Right-hand navigation menu:
 - PIANOFORTE MOBILITY GRANTS
 - LINKS
 - OPLEIDING IN STRALINGSBESCHERMING** (highlighted with a blue arrow)
 - WERKAANBIEDINGEN

<https://www.bvsabr.be>



Other useful information *Next activity of BVS-ABR*

- September 15: [BVS-ABR scientific meeting: declassification of sites - final stage](#)
- November 17: [60 years BVS-ABR: a better understanding of radiation protection – highschool contest final](#)
- (December 8: [BVS-ABR General Assembly and scientific meeting on the evolution of RP norms](#))

Mark your agenda 😊

More info: <https://www.bvsabr.be>



- *To the hosts and co-organisers:*

Pierre Kockerols, Danielle Berus, Stefan Cools

- *To the speakers:*

Kathleen De Wilde, Alexandre Jacquemin, Wouter Schroeyers, Klaus Bacher, Ovidiu Ene, Michèle Coeck, Stefan Cools, Pierre Duchatelet, Pascal Froment, Gert Jonkers, Gert Van Bortel, Vera Meynen, Quentin Goffard, Hans De Neef, An Fremout, Els Thoelen, Chantal Mommaert, Marleen Vandecapelle, Harrie Mol, Albrecht Houben, Klaus Bacher, Kristof Muylle, Paul Meijnders, Hannah Loots, Sébastien Lichtherte, Bart Vandenberghe, Astrid Wouters.

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BVS-ABR

Belgische Vereniging voor Stralingsbescherming – Association Belge de Radioprotection
Registered Office: Avenue Herrmann-Debrouxlaan 40 – BE-1160 BRUSSELS

office@bvsabr.be

www.bvsabr.be