

## “European stakeholders’ perception on linear accelerator TR/RTT competencies”

### Partners

UM – University of Malta (MT) – *WP leader*  
 ART – Associação Portuguesa dos Radioterapeutas (PT)  
 EFRS – European Federation of Radiographer Societies (EU)  
 PTE – Polskie Towarzystwo Elektroradiologii (PL)  
 UU – Ulster University (UK) – *SAFE EUROPE coordinator*

### Methodology

- Cross-case study
- Interviews with stakeholders:
  - o local and migrant TRs/RTTs, clinical managers, academic staff, students, professional association representatives.
- 27 Stakeholders from 4 countries:
  - o Finland, Poland, Portugal, and UK
  - o Selected based on variation in education programme characteristics between these countries
- 3 stakeholders from a European professional organisation
- Semi-structured interview based on:
  - o Literature review
  - o Results from SAFE EUROPE WP3
- Stakeholders invited by SAFE EUROPE partners + social media.
- Thematic analysis using NVivo v12.
- Triangulation, peer debriefing, member checking and line-by-line coding used to decrease respondent and researcher biases.

### Background

Education of Therapeutic Radiographers (TR) / Radiotherapists (RTT) is different across member-states. Multiple recommendations on the competencies to be developed at EQF6 level are available. However, since these guidelines are non-binding, some of these competencies were found to be underdeveloped (WP3).

This Work Package 4 (WP4) aimed to explore stakeholders’ opinion on these underdeveloped competencies, including explanations, importance of these competencies for practice and the recommended academic level to develop these competencies. The role of the TR/RTT is broad, however, this WP focused on competencies related to the linear accelerator (linac).

The results will feed WP10, where webinars on the least developed competencies will be made available to the public.

### Conclusion

Addressing these factors improves competency level, patient care and professional mobility. Regulators and universities have a major role in tackling these factors. However, professional associations, TR/RTTs and clinical departments can encourage the change.

### Results – Underdeveloped competencies in EU

Underdeveloped TR/RTT competencies identified on WP3 were confirmed. Participants identified two additional underdeveloped competency themes.

**Table 1 - Underdeveloped competencies and academic level recommended by stakeholders to develop them**

|                           |  |
|---------------------------|--|
| Pharmacology              | EQF6 (advanced practice requires EQF7) |
| Management and leadership | EQF6 (EQF7 for management roles)       |
| Equipment QA              | EQF6                                   |
| Research                  | EQF6 (further developed at EQF7 and 8) |
| Image verification (new)  | EQF6 or on-the-job training            |
| Critical thinking (new)   | EQF6                                   |

#### Factors hindering the development of these competencies

- Low academic levels (below EQF6) affect competencies in general, but critical thinking in particular
- Lack of RT-specific study-units – affect the development of pharmacology, management and leadership, and image verification competencies applied to RT, compromising level of practice
- Inter-professional boundaries – Affect training on equipment QA and critical thinking (lack of autonomy in decision making)
- Lack of time, resources (human and equipment) and access to clinical data affect the implementation of research projects (and competency)

### Factors affecting patient care

- Education (competency level) – lower competency level results in lower standards of care; a misalignment between education programmes and competencies required in clinical practice compromises safety
- Professional mobility – language issues (in rare cases) compromise care; otherwise, workforce diversity improves patient care. Patient safety competencies well developed across Europe.
- Lack of standardisation of practice (at national and European level) – leads to differences in competencies developed (within and between countries)
- Other factors: lack of risk management, research, and teamwork

### Factors affecting professional mobility

- Education programme characteristics affect mobility since differences hinder registration abroad (mainly: academic level, programme duration and specialisms)
- Lack or excess of graduates – TRs move from countries with mass unemployment to countries with lack of workforce
- Registration process abroad – Complex and expensive (including cost of necessary documentation). Lack of information
- Other factors: Language, personal reasons, political factors (e.g. Brexit), and salary and career progression (at the origin and destination countries).

### Detailed results and more information

Full research publications available on: [www.safeeurope.eu](http://www.safeeurope.eu)

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