

Digital Skills of TR/RTTs: level of development and future educational needs

Background

Therapeutic Radiographers/Radiation Therapists (TR/RTTs) have a key role in health care provision. They are also facing new challenges in terms of digital skills, for which continuous training is required. Despite all this, a common regulation for TR/RTT across Europe does not exist, leading to differences in skills required to qualify and practice across member states.

The WP7 aimed to identify digital skills gaps in the profile of the TR/RTT. This WP feeds this information to WP10, where webinars on the least developed digital skills will be made available to the public.

Methodology

Systematic search and thematic analysis of the literature

- Systematic search of the literature.
- Thematic analysis of the literature performed to identify the digital skills relevant for the TR/RTTs to perform their duties;
- The list of skills and their dimensions was assessed by external experts (n=10) with backgrounds and professional experience across all fields of Radiotherapy (RT);
- A peer debriefing was conducted by experts (n=7) from RT professional practice, RT education, and Medical Physics.

Survey

- ❖ Part 1 – Socio-demographic, education and professional characteristics;
- ❖ Part 2 – RT digital skills' level of development for TR/RTTs' practice;
- ❖ Part 3 – Education of RT digital skills.
- Pilot survey (n=46) in a Portuguese RT department;
- Distributed to TR/RTTs working in the European area;
- Descriptive statistics of quantitative data and thematic analysis of open questions.

Conclusions

- The digitalisation of healthcare is likely to become even more significant in the years to come. This poses a challenge for TR/RTTs, as current RT practice is entirely dependent on the support of digital equipment. As such they must develop the necessary digital skills to provide appropriate care to cancer patients.
- The education and training of TR/RTTs must be guided to develop and adapt its provision to meet the changing needs of this digitisation, to avoid differences in the levels of digital skills and consequently a variation in the level of care offered to the patient.

Results

Thematic analysis of the literature

- 195 digital skills were identified, organised in 35 sub-themes and grouped into six main themes (i) Transversal Digital Skills, (ii) RT Planning Image, (iii) RT Treatment Planning, (iv) RT Treatment Administration, (v) Quality, Safety and Risk Management, and (vi) Management, Education and Research;
- List of skills used in the design of the survey.

Survey

- 101 respondents from 13 European countries;
- Least developed themes: Treatment planning and Management and research.
- Most developed themes: Transversal digital skills and Treatment.
- Positive relationship found between digital skills level and:
 - ❖ Age (Rs=0.2, p<0.05);
 - ❖ Length of experience (Rs=0.3, p<0.05);
 - ❖ Range of clinical experience RT practice p<0.05;
 - ❖ Level of generic information and communication technology (ICT) skills (communication, content creation and problem-solving) p<0.05.
- Educational context in which digital skills are developed:
 - ❖ 69% of TR/RTTs develop most digital skills through continuous professional development (CPD). Of these, 33% through informal CPD;
 - ❖ 20% developed in their training to become TR/RTTs;
 - ❖ 36% through voluntary and mandatory CPD.
- Thematic analysis of the open-ended questions: additional digital skills and sub-themes were suggested by the TR/RTTs.

Recommendations

- Treatment planning, management and research-related digital skills were the least developed. As such, training in these areas is recommended;
- Digital skills can be developed in many ways: during TR/RTTs' initial education, through formal CPD (mandatory or voluntary) and informal CPD, such as on-the-job training;
- Training for TR/RTTs, in addition to developing specific RT skills, should also develop ICT skills;
- TR/RTTs should increase their work experience across the different areas of RT (such as pre-treatment imaging, planning and treatment) as this factor seems to impact the level of digital skills.

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