

SAFE EUROPE PROJECT

Results WP8



LIST OF ACTIVITIES FROM ADVANCED PRACTICE ROLES AMONGST
THERAPEUTIC RADIOGRAPHERS/RADIATION THERAPISTS WORKING AT
ADVANCED LEVEL PRACTICE: THEMATIC ANALYSIS OF THE SYSTEMATIC
LITERATURE REVIEW AND OF EUROPEAN SURVEY.

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Introduction

This list of activities from advanced practice (AP) roles of the Therapeutic Radiographers/Radiation Therapists (TR/RTTs) working at an advanced level across Europe was created by collating the activities of these practitioners identified within existing white literature (peer-reviewed publications). In addition, other activities from AP roles were identified in current practice amongst TR/RTTs through a European survey. This list was created using a rigorous research methodology. Details on the methodology can be found in the following research publications:

Oliveira C, Barbosa B, Couto JG, Bravo I, Khine R, McNair H. Advanced practice roles of therapeutic radiographers/radiation therapists: A systematic literature review. *Radiography*. 2022;28(3):605-619. doi:10.1016/j.radi.2022.04.009

Oliveira C, Barbosa B, Couto JG, Bravo I, Hughes C, McFadden S, Khine R, McNair H. Advanced practice roles amongst Therapeutic Radiographers/Radiation Therapists: A European survey. Submitted to *Radiography* journal.

SAFE EUROPE project

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The consortium includes 7 organisations (universities, an oncology hospital, professional associations and a federation of associations) with the aim of improving education and training of TR/RTTs across Europe.

More information and results from other work-packages can be found on the SAFE EUROPE website: <https://www.safeeurope.eu/outputs/>



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List of activities from AP roles of the Therapeutic Radiographer/Radiation Therapists working on Advanced Practice

During literature review and data analysis from European survey, advanced activities were identified and collated through a thematic analysis. Advanced activities were categorized by dimensions and subdimensions, clinical area of practice, disease site-specific role or scope of practice. The resulting list of activities was validated and reorganised by an expert panel from the SAFE EUROPE Consortium representing different European countries and areas of radiotherapy (professional practice, education and training, management, research, patient advocacy). Other activities, reported by survey respondents (AP TR/RTTs or TR/RTTs working on AP roles/tasks), were added to final list shown on the table below.

According to the literature, it is recommended that core capabilities and radiotherapy specific clinical competence for the performance of these activities with a high degree of autonomy and complex decision making should be developed by AP TR/RTTs across Europe. Differences in regulation of the profession leads to variation in the competencies and capabilities developed and practised by TR/RTTs in each country, therefore, the activities identified in this list are not country-specific but may be used to guide education in the pan-European setting. A recommendation is that the competencies and capabilities required to perform AP roles should be endorsed by master programmes dedicated to advanced practice education in radiotherapy across Europe.

Dimensions & subdimensions	Activities
PATIENT CARE & SUPPORT	
Patient assessment & management	<ul style="list-style-type: none"> - Physical, psychosocial, cognitive, sexual, and spiritual condition examination. - Patient history taking, treatment toxicity assessment/management, documentation of clinical response to treatment, etc.
Patient information	<ul style="list-style-type: none"> - Evidence based information for disease, prognosis, interventions, and treatment. - Telephone help line counselling, informed consent for procedures, post-treatment information, etc.
Pharmacological intervention	<ul style="list-style-type: none"> - Independent or supplementary drugs prescribing/administering/dispense, medications review, etc.
Follow-up & survivorship	<ul style="list-style-type: none"> - Physical/remote consultation, chronic side effects support/intervention, etc.
Patient holistic support	<ul style="list-style-type: none"> - Intervention in anxiety/distress/diet/exercise/relaxation/quality of life, liaison with support groups, etc.

Patient referral & orders	<ul style="list-style-type: none"> - Referral to other disciplines, order for dressings/tests/imaging investigations. - New patient clinic acceptance, review referral packages, requests authorizations, etc.
TREATMENT PLANNING	
Treatment prescription	<ul style="list-style-type: none"> - Dose prescription/fractionation/dose supplementation areas/dose constrains for OAR, etc.
Advanced planning & simulation	<ul style="list-style-type: none"> - Physical/virtual simulation, target delineation, OAR contouring, clinical mark up. - Plan/simulation evaluation & approval, contrast administration (IV/oral/rectal/cannulation), etc.
Planning of complex cases & techniques	<ul style="list-style-type: none"> - Peer review of IMRT/VMAT/brachytherapy/SRS/total CNS/ high risk target volumes. - Technical and dosimetry consultation, re-planning of complex cases, etc.
Multimodality image registration & fusion	<ul style="list-style-type: none"> - Quality evaluation and approval, manual adjustments, etc.
TREATMENT IMAGING & DELIVERY	
Advanced IGRT/ART	<ul style="list-style-type: none"> - 3D/4D/markers) imaging assessment, anatomical changes detection, plan of the day selection, adapt to position, decision making, and image approval, etc.
Supervision of complex cases & techniques	<ul style="list-style-type: none"> - Online checking, plan acceptance, re-plan decision. - Expert advice at problem solving, technical consultation, etc.
MANAGEMENT & CONSULTANCY	
Project management	<ul style="list-style-type: none"> - Engagement of team members, identification of partnerships and funding/grants, progress reports, etc.
Clinical governance & business cases	<ul style="list-style-type: none"> - Setting and monitoring service standards, performance/resources management. - Recruitment and retention, managerial and MDT meetings, policies development, etc.
National guidance & communication	<ul style="list-style-type: none"> - Writing management reports, patient's advocacy, RT working groups (profiles, protocols, etc), regional registration of treatments by tumour-site.
QUALITY & RISK MANAGEMENT	
Risk management	<ul style="list-style-type: none"> - Establishment of a radiation safety culture, risk improvement project (safe working practices), etc
Quality assurance & quality control	<ul style="list-style-type: none"> - Site-based QA rounds, online plan checking, quality improvement project, QA meetings, QA groups, etc.
RESEARCH & INNOVATION	
Advanced research & coordination of clinical trials	<ul style="list-style-type: none"> - Management of task groups, coordination of multicentre/international clinical trials, etc.
Evidence-based practice advancement	<ul style="list-style-type: none"> - Development of standards/protocols, establishment of site-specific expertise for professional leadership, MDT/site group meetings, tumour board activities, expert role model in RT with best professional practices, etc.

Audits & accreditation	- Development of audits programmes for new model of care/pathway/ changing of practices/new RT techniques, involvement in programmes accreditation, etc.
Knowledge dissemination	- Peer-review presentations and publications, reviewer for peer review journals, books and chapter author/co-author, awards, and honours, etc.
Innovation & service development	- Service redesign for comprehensive care, innovative integration of new technologies/ techniques/ procedures. - Planning of new facilities, development of multi-professional research agenda/ new principles/concepts, etc.
Strategic involvement at national & international level	- Participation in advisory committees/ special interest groups/ expert panels/ communities of practice, etc.
EDUCATION & TRAINING	
Advanced clinical education	- Coordination/supervision/evaluation of students from different academic degrees and inter-professional education, etc.
Education planning	- Lead role in development and assessment of educational inter-professional programmes. Recommendation of national & international curriculum, implementation of education programmes, etc.
CPD development	- External consultancy, assessor of international courses, development of training programmes for complex techniques, set in-house teaching courses with competence and training packages, etc.
RT advocacy	- Development of RT education resources for healthcare/community, awareness projects, etc.
CLINICAL AREA OF PRACTICE OR SITE-SPECIFIC ROLES	
Brachytherapy	- Patient initial assessment, patient information & counselling, patient education (pre-brachytherapy information). - OARs contouring for HDR, effective planning, process coordination. - Treatment application (ultrasound guidance, vaginal vault insertions, etc).
Breast	- Comprehensive care, review clinics for radical patients, consultation with new patients, referrals (physiotherapy, psychologist & medical), dietary & exercise interventions, psychosocial interventions, seroma evaluation & management. - Clinical breast mark up, simulation RTT-led, breast boost localisation, OARs contouring, target delineation (tumour bed, cavity, seroma), breast & boost planning.
Head & Neck	- Target localisation with multi-modality imaging, planning image, target definition & delineation (e.g., tomotherapy/adaptive RT), image assessment & approval.
Lung	- RT patient pathway management, MDT presentation of patient clinic data, responsible for the SBRT pathway, compile patient information leaflets (radical & palliative & SBRT). - Patients' selection, breath-hold coaching, support in simulation & treatment.
Neuro-oncology	- New patient pre-treatment assessment clinic, presentation of patient's clinic data in peer review session, post SRS follow-up, SRS clinic.

Paediatric	<ul style="list-style-type: none"> - Patient & parents counselling (telephone "follow-on"), specialized support & comfort (diversionary DVD, long-term tools for parents, education sessions in schools). - Treatment coordination (patient's advocacy, guidance & support for parents' decision making, liaising with paediatric oncology MDT (e.g., psychosocial, hospital play specialist, RT & oncology staff).
Palliative care	<ul style="list-style-type: none"> - Patient assessment (before, during & after treatment) & screening (diagnostic imaging, histology review, toxicity assessment, prescribing/administering medication), remote follow up, patient information & counselling (informed consent), supportive care, liaison with palliative care teams, referral & triage. - Treatment prescription, simulation (mark up, fields localisation/ordering simulation), treatment planning (approval), shared treatment decision making. - Supportive care: continuity of care (point of contact), treatment delivery team, pain control, scheduling future appointments, pre-treatment image approval. - Program planning & delivery (admission & discharge, triage referrals, treatment booking, transportation, documentation, liaison with other specialties, MDT meetings with case summary presentation & recommendations).
Urology/prostate	<ul style="list-style-type: none"> - On-treatment review (including patients from clinical trials), acute toxicity assessment, follow-up.
Other sites	<ul style="list-style-type: none"> - Gynaecology, colorectal, skin, mycosis fungoides, lymphoma, sarcoma, esophagus, chordoma.
SCOPE OF PRACTICE	
Follow-up	<ul style="list-style-type: none"> - Remote or physical follow-up clinic, survivorship support.
Image review	<ul style="list-style-type: none"> - IGRT/ART: image assessment & decision making (with approval).
Information & support	<ul style="list-style-type: none"> - Patient specialised information, counselling, and holistic support.
On-treatment review	<ul style="list-style-type: none"> - Treatment assessment & management, pharmacological intervention, patient referral & orders.
Pre-treatment	<ul style="list-style-type: none"> - Simulation /CT-simulation RTT-led, site-specific tasks: CTV delineation, OARs contouring, advanced planning.
Practice development	<ul style="list-style-type: none"> - Leadership & supervision of RT staff, quality improvements initiatives & reports.
Clinical research	<ul style="list-style-type: none"> - Research & development, clinical analysis, clinical trials research, clinical research with co-joining role of patient review.
Other roles	<ul style="list-style-type: none"> - Management site-specific advanced practitioner, education & training advanced practitioner, molecular RT, radiation safety/QA RTT, information technology, new technology education, SBRT/SRS/tomotherapy advanced practitioner, quality & risk manager.

ART- adaptive radiation therapy, CNS-central nervous system, CPD- continuing professional development, CT- computed tomography, CTV-clinical target volume, HDR- high dose rate, IGRT- image-guided radiation therapy, IMRT- intensity-modulated radiation therapy, IV- intravenous, MDT- multidisciplinary team, OARs- organs at risk, QA- quality assurance, RT- radiation therapy, RTT- radiation therapist, SBRT- stereotactic body radiation therapy, SRS-stereotactic radiosurgery, tt-treatment, VMAT- volumetric modulated arc therapy.