Clinical Specialist Radiation Therapist Community of Practice: Hiring Manger's Toolkit

2021

Ontario
Cancer Care Ontario
Action Cancer Ontario

Acknowledgements

This toolkit has been compiled using the experience and wisdom of many people involved in the exploration and implementation of new ways of working for health care professionals in Ontario.

I would like to acknowledge Denise Bryant-Lukosius at McMaster University and the PEPPA Project Team for granting us permission to directly use content and resources from the Oncology Advanced Practice Nursing (APN) Role Implementation Toolkit to help us expedite our Request for Proposal (RFP) process. The APN Toolkit includes resources and materials developed by Dr. Bryant-Lukosius.

It is also important to acknowledge all the members of the Project Oversight Committee (current and previous) who contributed many hours of their time to guiding and improving this Project.

The ongoing success of this Project is due, in large part, to the work of the previous and current Clinical Specialist Radiation Therapists (CSRTs) who have contributed much to the evolution of how we envision the CSRT and how we evaluate their success. There are many others – some part of the larger Project, and others who contribute tremendous energy to the CSRTs in their home centres – who have added incredible value and rigor to what we are doing. I am grateful for all that these committed professionals have contributed to this initiative over the years.

Finally, the Ministry of Health and Long-Term Care is recognized for the support and momentum they have provided this Project since its inception in 2003.

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Nicole Harnett, Project Manager

CSRT Sustainability Project, Cancer Care Ontario

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Introduction/About the Toolkit

About the Toolkit

This toolkit is designed to assist Managers and Administrators in radiation therapy departments to assess the need for Clinical Specialist Radiation Therapists (CSRT), design the position for a specific service delivery model, implement the position and understand how to evaluate the success of the position in achieving defined goals and outcomes.

Using the Toolkit

Managers can use each chapter of this toolkit in chronological order or focus on areas where they need assistance and support. The toolkit chapters include key steps that need to be considered in the planning process for introducing the CSRT position. Detailed information on each step is provided in the form of samples, resources and templates in the Appendices Section at the back of the toolkit as well as at the Project website – https://www.cancercareontario.ca/en/cancer-care-ontario/programs/clinical-services/patient-reported-outcomes-symptom-management/radiation-treatment/clinical-specialist-radiation-therapist.

CSRTs are radiation therapists, registered with the College of Medical Radiation and Imaging Technologists of Ontario (CMRITO) in the specialty of radiation therapy, who have obtained additional knowledge, skills and judgment that allows them to perform their full scope of practice, including specific activities that are managed through either medical directives or delegation.

The toolkit is intentionally brief in order to assist busy Managers to quickly review the steps needed to successfully create and implement a CSRT position within tight timelines. Managers can also use this toolkit as a checklist or reference guide to ensure they have devised an appropriate plan.

Framework

In writing this toolkit, two frameworks were used as reference:

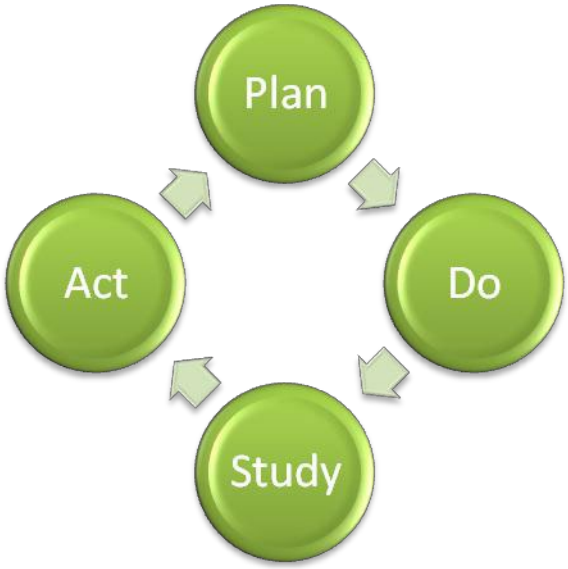
Quality framework referred as the "Plan, Do, Study, Act (PDSA)" (Deming, 1986).

Framework for new service delivery models, the PEPPA framework (Participatory, Evidence-informed, Patient-centred Process for Advanced practice nursing role) (Bryant- Lukosius & DiCenso, 2004; Bryant-Lukosius, DiCenso, Browne, & Pinelli, 2004).

The PDSA is a commonly used framework that emphasizes the quality improvement nature of any innovative planned activity. The process calls for repeated cycles of planning, doing, studying (or evaluating) and finally acting (or implementing changes based on the evaluation). The cycle repeats continuously to improve the intervention or design of a service on an ongoing basis. See Figure 1 for a visual depiction of the PDSA framework.

Additionally, valuable experiences and lessons learnt from the CSRT Demonstration Project[1] have been used to inform the development of this toolkit. The CSRT Demonstration Project was designed using the PDSA framework as a long-term process of planning, implementing, evaluating and continuously improving the CSRT role overall. The majority of this toolkit will address the PLAN aspect of this model as the Project has developed strategies and tools for the "DO, STUDY and ACT" phases of the cycle. These will be used by the new CSRTs once implemented.

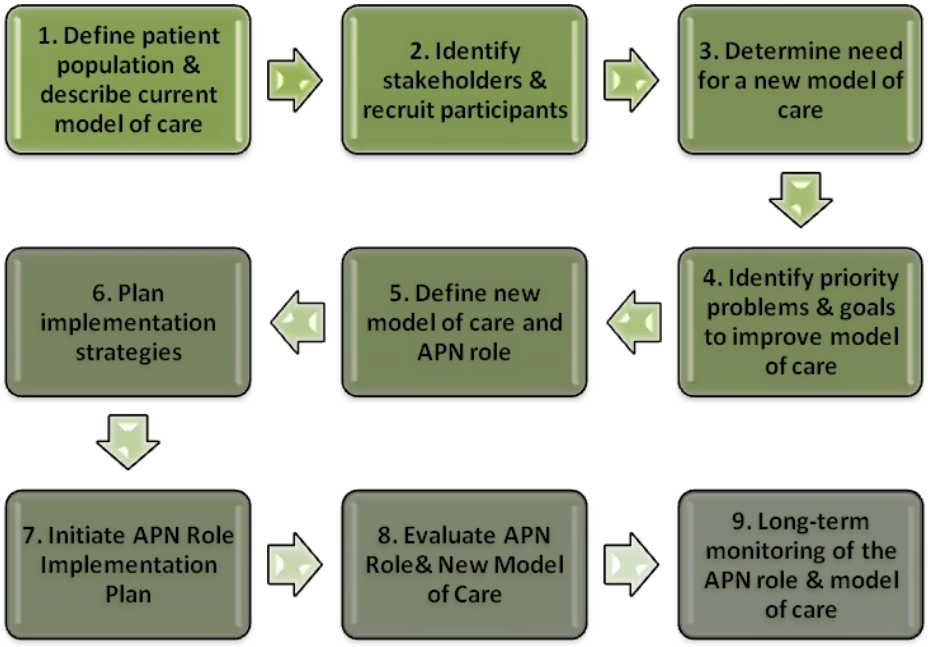
Figure 1: Plan, Do, Study, Act (PDSA) Framework



[1] The CSRT Demonstration Project, funded by the Ontario Ministry of Health and Long Term Care, involved the selection and implementation of nine CSRT positions at five Ontario Regional Cancer Care Centres. The four phases of the CSRT Demonstration Project occurred between March 2007 and March 2010.

The PEPPA framework, on the other hand, is conceptualized for systematically planning and implementing a service delivery improvement process such as the role of advanced practice clinicians. Although the PEPPA framework was initially developed for implementing advanced practice nursing positions, the framework has been successfully used and evaluated for other roles such as advanced practice roles for physiotherapists (Robarts et al, 2008). Findings from the implementation and evaluation of advanced practice roles can help inform the planning and implementation of the CSRT position. This link at Cancer Quality Council of Ontario explains the full PEPPA Framework for use as a resource for various aspects of developing the CSRT Implementation Plan. See Figure 2 for the visual depiction of the PEPPA framework.

Figure 2: PEPPA Framework



Bryant-Lukosius, D., & DiCenso, A. (2004).

Background Context

The Clinical Specialist Radiation Therapist (CSRT) Demonstration Project began in March 2007. The Ministry of Health and Long-Term Care (MOHLTC) provided funding to build on the work of the Advanced Practice Radiation Therapy Development Project (2004-2006) through the investigation of new and creative ways of practicing for radiation therapists in Ontario's cancer care system.

Phase I of the CSRT Demonstration Project began with the selection and implementation of five CSRT positions at two Ontario Regional Cancer Centres. This pilot study evaluated the potential benefits of CSRTs to patients receiving care in radiotherapy departments in Ontario cancer centres.

Data and information obtained during Phase I suggested that a number of important benefits could be realized through implementation of the CSRT role, and that stakeholders – including patients and the interprofessional team – supported the role. CSRTs were also able to achieve notable reductions in wait times and improve access to services during the period of study. The evaluation report for Phase I emphasized the flexibility offered by the CSRT within the interprofessional team by allowing programs to shift or modify the focus of the CSRT across the patient care pathway in response to changing pressures over time.

In light of the early positive results from Phase I, the MOHLTC provided additional funding to extend the Project for one year. The Extension Phase allowed the existing CSRTs to continue their clinical work, collect the data required to create a robust and rigorous CSRT-specific dataset, and fill any data gaps identified in Phase I.

With the continued success of Phase I, the province also provided concurrent funding for Phase II of the CSRT Demonstration Project, from August 2008 to March 2010. Phase II involved the introduction of five additional CSRT positions in cancer centres outside the Greater Toronto Area. Phase II focused on the examination of how the CSRT role could be modified to create positions that meet different system and population needs. Consistent with Ontario's broader health human resources strategy, the province hoped to establish that CSRTs could help smaller centres improve access to service, including traditionally "harder to reach" populations such as Francophone or Aboriginal communities.

During the final extension of Phase I, *Phase I Extension 2 (or IE^2)*, in combination with ongoing data collection, the Project turned its focus to understanding the issues related to sustainability of the role in alignment with provincial and Cancer Care Ontario priorities. Recommendations were formulated to incorporate the CSRT role into models of care to assist in health human resource planning for the optimization of patient care. The summative report submitted to the MOHLTC in May 2010 including a recommendation for a "sustainability" phase of the project.

In March 2011, the MOHLTC awarded funding for the CSRT Sustainability Project – a three- year project that outlines and supports the remaining activities necessary to ensure consistent and standard development and deployment of CSRT positions as needed throughout the system. These include controlled transition of existing CSRTs into permanent team members, the development of additional CSRT positions across the province and the formalization of the CSRT role through standard setting and valid certification processes.

Parallel collaborative work also began with both the Canadian Association of Medical Radiation Technologists (CAMRT) - the national professional certification body, and the College of Medical Radiation and Imaging Technologists of Ontario (CMRITO) - the provincial regulatory body for radiation therapists. The first steps were to validate the drafted competency profile through a provincial working group that was convened. The group consisted of members from CAMRT and CMRITO, validation experts and members of the Project Oversight Committee (POC) of the CSRT Project. A thorough step-by-step review of each competency was conducted, with each line meticulously analyzed for validity, clarity and meaning. The second step involved reviewing each competency based on the category that it was in and ensuring that all competencies were under

the correct section. A third step was taken to review the entire competency list for a gap analysis. Initial discussion was held in regards to the action items and assessment possibility for each competency. In a second meeting, facilitated by assessment methodology consultants, the working group members discussed in detail the ability of the competencies to be assessed by the different measures. An initial blueprint on the effective methods of assessing performance was constructed and was reviewed against the CMRITO scope of practice at a later date.

The validation of the competencies was completed at a national level by the CAMRT, who distributed the competency profile produced by the CSRT Project to its members and relevant stakeholders. Positive results were garnered from the quantitative and qualitative information yielded from the review and only minor revisions to the competency profile were made. This information was used by the CAMRT in the development of methods and mechanism for national certification of APRTs. A finalized competency profile was published and a blueprint for assessment of the competencies developed and implemented as part of a pilot project running from September 2015 to June 2016.

The nationally validated advanced competencies form the basis of a three-phase certification process established by the CAMRT for the APRT(T) designation. It is anticipated that each CSRT will build and develop advanced competencies appropriate to achieve the advanced level certification for APRT(T).

In 2016, as a continuation of the CSRT development, CCO had established the CSRT Community of Practice (CoP). The CSRT CoP is to advocate for and support a collective CSRT/APRT identity that will ensure role sustainability and growth by means of collecting evidence, communication of results and advocacy for the value of the role with relevant stakeholders. The purpose of the CSRT CoP is to facilitate knowledge exchange between CSRT/APRT and to drive forward quality improvement initiatives to ensure that the field of advanced practice in radiation therapy delivers the highest quality of care to Ontarians.

CSRT Project Phases

- Advanced Practice Radiation Therapy (APRT) Development Project (2004-2006)
- CSRT Demonstration Project – Phase I (March 1, 2007 to March 31, 2008)
- CSRT Demonstration Project – Phase I Extension (April 1, 2008 to March 31, 2009)
- CSRT Demonstration Project – Phase II Expansion (August 1, 2008 to March 31, 2010)
- CSRT Demonstration Project – Phase IE^2 (April 1, 2009 to March 31, 2010)
- CSRT Sustainability/Integration Project (April 1, 2010 to March 31, 2016)
- Establishment of CSRT Community of Practice (CoP) (2016 to Present)

For a more detailed background of the Projects, please visit CCO website https://www.cancercareontario.ca/en/guidelines-advice/treatment-modality/nursing-care/advanced-practice-nursing-toolkit

Purpose of the Tool Kit

The purpose of this Tool Kit is to provide Managers and Administrators, who are interested in the creation of a CSRT position, with the necessary background, tools, and guidelines to ensure a smooth and consistent development of an advanced practice role in the MRT(T) profession.

Process Overview

Plan - Business plan for the position.

Do – Recruitment and introducing the role to health care providers.

Study – Compile and analyze outcome data.

Act – Continuous improvement based on data evidence.

SECTION 1: PLAN

Define Area of Interest and/or Patient Population

Defining the patient population of interest is important for several purposes:

a) Determine the scope of the service delivery model that you want to influence by introducing the CSRT position,
b) Assist in establishing clear outcomes that are both patient and system focused, and
c) Engage the appropriate stakeholders involved in the current service delivery including the patients and their families.

To describe the area of interest and/or patient population, the following may be used:

a) Demographics such as age, gender, ethno-cultural backgrounds,
b) Geographic location of patients (urban, rural, mixed, virtual),
c) Size of target group (# of patients seen in a year, # of patients in waiting list, prevalence of disease in region),
d) Disease category and sub-categories (diagnoses),
e) Any other specific identifiers that could impact on the planning process (e.g. Stage in service delivery process – e.g. new patient, on-treatment, follow up, etc.),
f) New initiatives being embraced or implemented.

Data to help describe the patient population and specific activities can be gathered from statistics that are maintained in the health records department, CIHR reports and organization or program annual reports. Provide description along with visual display such as pie charts, bar graphs and other forms of displaying statistics.

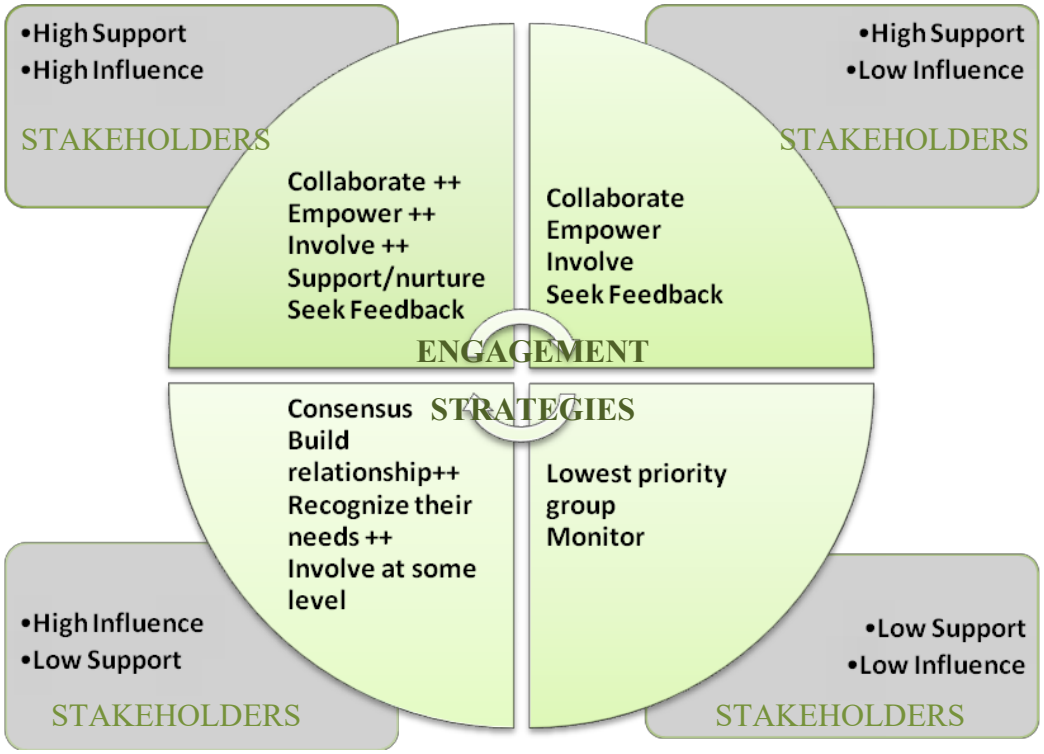
Identify and Engage Key Stakeholders

In any change process, involving key stakeholders can help in a number of ways:

- Gathering multiple perspectives and wide range of knowledge bases
- Identifying a more comprehensive set of needs, barriers and facilitators
- Determining who will help to champion and support the change initiative
- Determining who will be required to influence decision making at different stages of the change process
- Mobilizing resources to support the activities at the implementation stage, e.g., developing orientation materials, coaching/mentoring the new CSRT, etc.

To start the process of engaging key stakeholders, use the following grid (see Figure 3) to determine who your stakeholders are, which ones are likely to *support* the introduction of the CSRT position, which ones will positively *influence* the implementation of the position, etc. Once you determine where your key stakeholders stand, you can start developing strategies to bring "on board" those whose support your plan and who have influence over the successful acceptance and implementation of the position. Those who are influential but are not currently supportive of the role are stakeholders you need to work on to understand their needs, and who you can work with collaboratively to engage them at some level.

Figure: Identification and Engagement of Key Stakeholders



Adapted From: Registered Nurses' Association of Ontario (2002). Best Practice Guidelines. Toolkit: Implementation of Clinical Practice Guidelines. Toronto: RNAO.

Needs Assessment

To conduct an effective needs assessment for planning and implementing the CSRT position, you will need to articulate your current service delivery model, identify the issues and gaps in the model and the priority problems and goals that need to be addressed.

Describe Current Service Delivery Model

A common way to describe your current service delivery model is to review or develop your patient care pathway used in your service area. Additionally, describe which care provider category is involved at each stage of the pathway. Lastly, if available, state the amount of time including waiting time for the patient at each stage of the process. If this baseline data is not available, it will likely be important that the CSRT include that in their data collection strategies. You may also state what data you have of the patient's experience at each stage of the process (e.g., patient satisfaction, pain/discomfort, complaints, etc.) Appendix A contains a basic patient care pathway to use as a starting point. Actual patient care pathways are more detailed; outlining activities and professionals involved (see Appendix B).

Define Issues & Gaps in Service Delivery

There are several quick ways to define issues and gaps in your service delivery model:

a) Using your patient care pathway, work with your stakeholders to brainstorm what issues and gaps are currently occurring in your service area or areas that your team feels can be improved significantly.
b) Review your patient and staff satisfaction results to identify issues and gaps.
c) Review other quality data including wait times, length of stay, resource utilization data, etc.
d) Conduct or use recent environmental scan results.
e) Conduct focus group or short on-line survey.

See Appendix B for sample needs assessment questionnaires or refer the PEPPA Framework (PEPPA Framework).

Determine Priority Problems

Once a list of issues and gaps are defined, you need to determine where you want to have your priority focus in order to improve your care/service delivery model. Use the following common questions to help you determine your priorities:

a) Which issues create the most problems for your patients, team members and other departments in the hospital? E.g. inefficient processes, etc. (HIGH VOLUME)
b) Which issues create the most acute or high risk problems? E.g. patient safety, patient well-being, staff safety, etc. (HIGH RISK)

c) Which issues create or result in high cost to the organization? Or to the system? E.g. high overtime costs, turnover of staff, repeat work, etc. (HIGH COST)
d) Which issues create sub-standard care levels? (HIGH QUALITY IMPACT)

Identified issues that speak to the most questions would be considered your high priority problems.

Get Consensus on Priority Problem

In order to ensure you have buy-in on the priority problems, you need to ensure stakeholders that are essential to the successful acceptance and implementation of the CSRT position agree with the priority problems. This is a key area to get feedback from your high influence/low support stakeholders so you can turn their low support to high support.

The CSRT Demonstration Project can provide many of the standard metrics to be used in assessing position success.

Designing the Clinical Specialist Radiation Therapist Position

Define New Service Delivery Model

Once needs are defined and prioritized, it is important to determine, how the service delivery model will be changed in order to address the needs. Specifically, how will the CSRT position help to address the defined needs.

Working with your stakeholders, you could revise your patient care pathway and redesign the service delivery model. For example, if the major problem in a service or program is wait time, what activities will the CSRT's undertake that will allow a more efficient and effective utilization of unique skills and make it possible for patients to get services quicker? Or if a bottle neck exists in the patient care pathway, what will the CSRT do to alleviate that bottle neck?

Identify Key Outcomes to be Achieved with New Service Delivery Model

While the Project has specific key targeted outcomes, it is important to consider and articulate what is expected once the CSRT position is implemented. This will help ensure that the implementation of the new service delivery model using the CSRT position is on track.

The following are the common outcomes that have been identified as part of this Project. Other outcomes may be required to assess specific positions and will be established between the site and the Project:

- Decrease patient wait times - review your patient care pathway and determine areas in the pathway where wait times can be monitored
- Increase patient satisfaction with services and care received
- Decrease patient complaints
- Increase the number of patients entering the system or accessing specific services – e.g., increased recruitment to clinical trials, etc.
- Increase in access to services by patients from traditionally underserviced populations

Outline Clinical Specialist Radiation Therapist Position

It is important to realize that, for the duration of this Project, job descriptions and positions may evolve over time. Every effort should be made to create a clear and concise description of the position, but it is understood that it may be required to slightly alter the original vision of the position.

A general, high-level description of the position should outline the following:

- The nature of the expectations
- The environment in which the position will be implemented including the composition of the existing team
- Details regarding the current service or program
- Specification of will provide direct supervision and support to the CSRT
- Any other details that provide structure and context to the position

(See Sample Job Description in Appendix C or additional samples at Cancer Care Ontario.

Define Competency Requirement

Use the Competency Profile, available on the website https://www.camrt.ca/wp-content/uploads/2019/01/APRTT-Competency-Profile-2018-11-FINAL.pdf, to select all the competencies that will apply to the new CSRT position that you are proposing. The language of the specific competencies should not be altered, but their "context" should be articulated clearly – e.g. specific patient population (disease site, specific conditions or treatment approach, etc.), where in the patient care pathway the activities will be carried out (new patient clinic, planning, on-treatment review, follow up, etc.), the location of the activity (onsite, in the community, etc.) and any other descriptors that provide clear specification of what is expected of the CSRT in the position.

SECTION 2: DO

In an effort to ensure successful integration and adoption of the CSRT role into practice, it is important to demonstrate in your Implementation Plan how you plan to introduce the new CSRT position in your radiation therapy department and orient/support/implement the individual in the CSRT role.

Recruitment and Selection of new CSRT

Based on the description you have developed for the new position, you will create a job posting that will be used to communicate/advertise the recruitment of the CSRT positions. It is important to note, that there is no recognized formal preparation for CSRTs at this time. In order to select the most qualified applicant to fill the pilot CSRT position, a Prior Learning Assessment and Recognition (PLAR) process (see Appendix D) has been developed and implemented in all phases of the CSRT Demonstration Project. It is comprised of 2 components:

- The creation of a professional portfolio for review and assessment
- The completion of a face-to-face practical skills assessment and interview

Introducing Role to Health Care Providers

Communication is one of the most important strategies for success when implementing new roles in the health care system. A well developed and detailed communication strategy is key to ensure that all stakeholders are aware of the nature and scope of the new position. This is paramount to ensuring successful deployment of the CSRT and maximizing the positive benefits of the position within the team environment.

Communication of plans should start early and be continual leading up to the implementation of the position as well as during the early stages of its activities. Some common strategies are: program-wide announcements, presentations at departmental meetings, special rounds, regular newsletter updates, internal website posting, email updates, etc.

Orientation and On-going Support

In some instances, the incumbent will not have all the knowledge, skills and judgment to fulfill the CSRT position to its fullest. As such, it is important for the site to envision how the CSRT will traverse the learning curve required to function in the position. While the incumbent will play a major role in identifying his/her specific learning needs, the program will need to articulate the nature of the support to be provided as well as the kind of activities you hope to see from the CSRT in each phase of implementation and how performance will be monitored. A sample implementation plan can be found in Appendix E.

At this time, it is unlikely that the incumbent will have all the knowledge, skills and judgment to fulfill the CSRT role to its fullest

Establish Key Milestones, Timelines and Responsibilities

To ensure success and continued support of the role, it is important to have a robust data collection methods and tools (for summary descriptions of these, visit https://www.cancercareontario.ca/en/cancer-care-ontario/programs/clinical-services/patient-reported-outcomes-symptom-management/radiation-treatment/clinical-specialist-radiation-therapist).

Summary of Barriers and Facilitators that need to be addressed for Successful Implementation

Barriers	Facilitators
Lack of clear role responsibilities and working relationships with team members	Alignment of CSRT with service vision and mission and valuing of CSRT
Overlap or duplication in role functions amongst disciplines	Systematically developed plan
Lack of clarity in position description	Involvement and collaboration with key stakeholders
Lack of support mechanisms for the CSRT, e.g., support for problem solving, addressing conflicts, etc.	Project management with clear deliverables, timelines and responsibilities
Lack of capacity development plans, e.g., competency development strategies and supports	Clear communication strategy along with education of interdisciplinary team about the CSRT position

Barriers	Facilitators
Lack of supplies, tools, space and other logistical resources to assist CSRT with new position functions	Defined and clear set of CSRT competencies
Lack of fit between personal characteristics of CSRT and position requirements	Detailed plan for CSRT to develop competencies
	Available and supportive mentors
	Clear reporting channels
	Defined goals and outcomes for the CSRT position and evaluation plan
	Opportunities for networking amongst CSRTs

SECTION 3: STUDY

CSRT can work with the manager and the relevant stakeholders to generate a Competency Development Plan for the purpose of identifying the knowledge, skills and competencies required for achieving the objectives of the position (see Appendix C for template and example).

During the CSRT Demonstration and Sustainability Projects, a standard set of data collection tools and methods have been established and implemented. These metrics are helpful in assessing the competency of the CSRT and measuring the impact a CSRT, both quantitatively and qualitatively, has on the institution.

- Skill concordance studies
- Quantitative Measure
- Wait time data
- Access to care: Throughput and Time saving
- Qualitative Measure
- Patient satisfaction survey
- Stakeholder satisfaction surveys
- Radiation therapy satisfaction surveys
- Improved process
- Innovation, Development & Knowledge Translation

Detailed information and templates used for the collection of the above metrics can be found in Section 4. In addition to the standard set of metrics, each CSRT position will have additional unique characteristics that can be monitored and measured. Below are examples for breast and palliative.

Breast – Assessing the acceptability of cavity contours using Cavity Visualization Score (CVS)

- The CSRT directed 20 (66.7%) cases for planning without RO review; 19 were accepted (without changes) by the RO upon final plan review and 1 was changed for boost treatment but accepted for tangential RT (CI=0.93). Ten (33.3%) cases, all CVS≤3, were reviewed with the RO prior to planning (CI=0.88±0.12). CVS was inversely correlated with breast density and cavity size ($p<0.01$).

Palliative

1. Assessing concordance between RO and CSRT in treatment volume definition
    - The Dice index for target volume delineation (n = 30) yields an average coefficient of 0.96, a minimum coefficient of 0.74 and maximum coefficient of 1.0. For field placements, 16/43 were for brain metastases, and 27/43 for bony metastases. The average discrepancy between the CSRT and the RO was 0.32cm, with a maximum

discrepancy of 1.4 cm, and a minimum discrepancy of 0 cm. Through subgrouping this data for brain metastases and bony metastases cases, the average discrepancy for brain metastases cases is 0.26cm, and the average discrepancy for bony metastases cases is 0.35 cm.

2. Assessing concordance between RO and CSRT in prescription
    - Concordance for prescription selection for 15 cases each of brain and bony metastases was seen in 14 out of 15 of the brain metastases cases, and 13 out of 15 of the bony metastases cases
    - The total number of dose intent forms entered by the CSRT was 31 sites (19 patients) during the time of data collection for this concordance activity. Complete concordance was achieved on 27 of the 31 courses entered (87%).
3. Assessing concordance in medication recommendation
    - 19.8% of the study population required change in medications, and medication recommendations were 96.7% concordant between the RO and CSRT.

SECTION 4: ACT

It will be important to constantly monitor the performance of both the CSRT and of the position in the program or service in which it is implemented. As data are available, it should be reviewed on a regular basis and acted upon should it show that evolution or modification of the position is required.

CSRT sites should have some initial plans on how they will continue to improve the position as well as review and disseminate the findings among key stakeholders and supervisors. Key indicators (e.g., wait times, throughput, new services) and mechanisms for monitoring progress are to be established by the institution to assess if the CSRT position is valuable to the institution.

Example of outcome measurement:

CSRT type	**Direct Capacity Building**		**Indirect Time Saving**	
	Description	**Increased capacity**	**Description**	**Savings (# of RO hours saved)**
CSRT (site)	Telemedicine consult/triage and for follow up – 4 pts/mo	+2 pts/mo	Virtual simulation in place of RO - ~40 pts/mo x 20 min/sim	13 hrs/mo
	Additional NPs seen weekly with CSRT scheduled and adhoc bookings	+16 pts/mo		
	Independent consult of 4 pts/wk in rapid response clinic	+16 pts/mo seen	16 pts/mo x 6 min/pt Unscheduled patient support – 2 pts/mo x 40 min/pt	~10 hrs/mo
	On-treatment review		On treatment review 4-6pt/week	~160mins/mo
	RT planning		Target/OAR contouring – 12 pts/mo x 20 min/pt	~240min per month

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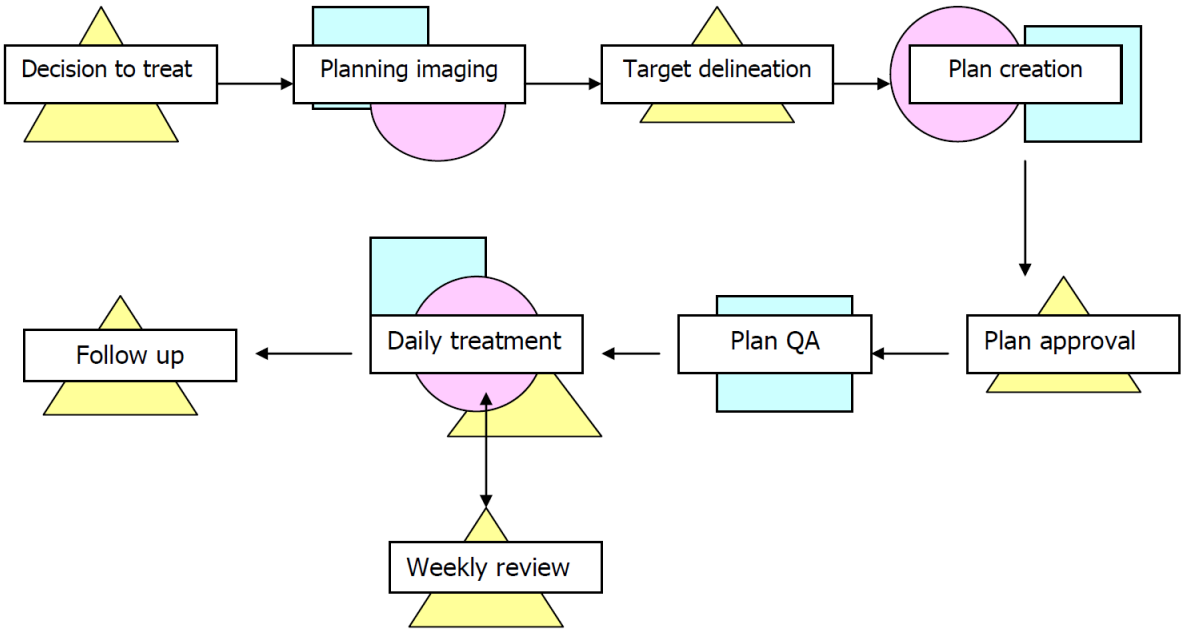
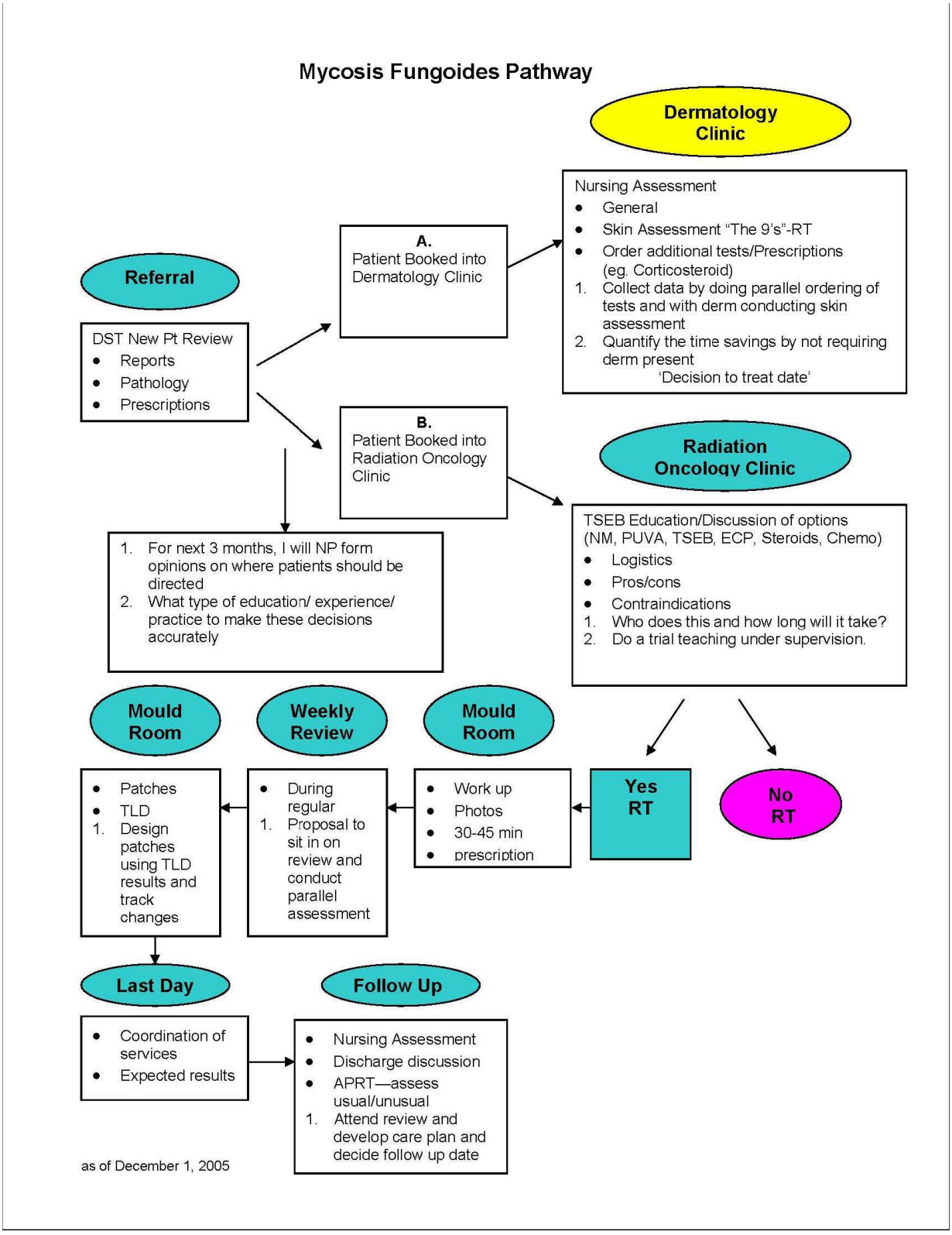
APPENDIX A: BASIC PATIENT CARE PATHWAY



APPENDIX B: Detailed Patient Care Pathway



APPENDIX C: SAMPLE JOB DESCRIPTION

Please contact Nicole Harnett for the latest Job Description Samples.

Email: Nicole.Harnett@rmp.uhn.ca

Phone: 1-416-946-4501 Ext. 5756

CSRT Role Profile (SAMPLE; November 2021)

1. **Role - Position Identification**

Position Title: Clinical Specialist Radiation Therapist, XXXX
Name of Incumbent: _____
Department: _____
Reports to (Title): _____
Key Relationship(s): _____
Date Completed: _____

2. **Areas of Responsibility**

The Clinical Specialist Radiation Therapist (CSRT) will enhance radiation therapy practice and patient-focused outcomes for patients undergoing XXXX through expanded, direct and comprehensive care, education, research, and practice, professional, and organizational leadership. The Clinical Specialist XXXX Radiation Therapist is a registered Radiation Therapist who has acquired advanced knowledge and skills through a combination of workplace learning, formal courses and/or professional development activities. They are a highly competent academic practitioner with advanced knowledge, skills and judgment permitting autonomous clinical practice in the management of patients undergoing radiation treatment for XXX disease. The CSRT will integrate theoretical, research and practical knowledge to exercise sound judgment across complex and varying social, cultural and organizational contexts making a unique and significant contribution to the timely provision of excellent radiation therapy treatment and patient care in the cancer care system.

CSRT Roles and Responsibilities:

The **CSRT** will play an integral role for XXXX patients referred to the XXXX. By liaising with various site groups and team members, and triaging patients as required, the individual will be able to facilitate appropriate and efficient movement of the patient through the system. The individual will function within the interdisciplinary healthcare team by providing comprehensive assessment, and referral of patients, as well as technical evaluation of all aspects of treatment delivery. This individual will be responsible for ensuring quality patient care as part of the multidisciplinary health care team with a focus on ensuring continuity of care from referral to

follow up and efficient navigation of the patient through the system. With a high level of autonomy, the CSRT will formulate care plans in conjunction with the radiation oncologist, patient/family/caregiver, and other professionals as required. The CSRT will conduct ongoing assessment of the patient, provide education to the patient on expected toxicities and ongoing support for the management of those toxicities, as well as participate in weekly review and/or follow up care. From a technical standpoint, the CSRT will provide guidance on patient positioning, planning parameters and treatment verification. The CSRT will serve as a consultant within the interdisciplinary and multi-site XXXX team and provide education and mentorship to others. At the program level, the CSRT will apply leadership, research and educational expertise to enhance the application of evidence-based practice, principles of best practice, and quality practices.

Clinical Practice (50 - 80 %)

The CSRT will work as a member of the XXXX interdisciplinary care team to provide optimal patient care for patients undergoing XXXX in accordance with the scope of practice, medical directives/protocols and practice guidelines. They will also utilize their advanced technical knowledge to function as an expert in the XXXX program. Responsibilities may include but are not limited to:

a) Triage patients to ensure identification of patients suitable for XXXX and the various trials and protocols at the appropriate urgency level
b) Assess patient before, during and after radiation therapy, for physical and psychosocial distress with appropriate documentation of findings or referrals
c) Act as a patient navigator to ensure patients identified for XXXX traverse through the system efficiently
d) Formulate, implement, and continuously assess effectiveness of patient's medical care plan
e) Consult, as part of the interdisciplinary team, on relevant patient cases
f) Act as a resource and central coordinating individual across all the site groups using XXXX
g) Provide technical and dosimetric consultation at all phases of the radiation therapy planning and treatment process
h) Accurately locate relevant target volumes, organs at risk and regions of interest for use in the creation of an optimized treatment plan and assess optimized treatment plans
i) Approve treatment unit verification/localization images and image guidance shift trends where applicable
j) Apply advanced technical knowledge to improve the integration of existing, or facilitate the application of new technology throughout practice where applicable

Education & Staff Development (10 - 25 %)

a) Create and maintain a learner-centered environment for staff and student learners
b) Assess learning needs of new radiation therapists rotating to XXXX machines using a variety of inputs
c) Provide opportunities for ongoing professional development of staff by delivering presentations and educational sessions, creating learning plans and materials as required
d) Provide training to radiation therapists in Planning or Treatment Units on any new XXXX protocols/ techniques/equipment
e) Assess staff knowledge of XXXX, identify need for remediation and collaborate with Clinical Educators to provide remediation
f) Lead and participate in the development, implementation and evaluation of educational activities and materials designed to meet the learning needs of patients, families and caregivers

Leadership/Change Agent (10 - 25 %)

a) Contribute to the optimal function of the health care team through continual assessment, evaluation and self-reflection
b) Collaborate with others across the intra and interprofessional team for broad change initiatives
c) Optimize awareness and utilization of a program/service through communication, promotion and advocacy
d) Participate in strategic planning and goal setting for the program or service
e) Contribute to a culture of patient safety and continuous improvement by supporting an environment of psychological safety, reporting, accountability, teamwork and engagement
f) Participate and provide leadership related to the development of policies and procedures, education, and research in XXXX

Knowledge Mobilizer/ Scholar/Researcher (10 - 25%)

a) Lead research/academic scholarship initiatives and quality improvement work for the XXXX group
b) Contribute to the scholarly endeavors of the XXXX team through collaboration and participation in existing research studies
c) Identify care gaps and lead/participate in integrating evidence-informed interventions
d) Present research findings at conferences, rounds and in-services.
e) Supports knowledge mobilization between the intra and interprofessional team

3. Eligibility Requirements

- Qualified Radiation Therapist Registered with College of Medical Radiation and Imaging Technologists of Ontario (CMRITO)
- Minimum 5 years' experience in the field of Radiation Therapy
- Bachelor of Science Degree
- Master's Degree in related field (or "in progress") preferred
- CPR Certified
- Strong interpersonal and team-based skills
- Proven leadership skills
- Able to work independently with a minimum of direction
- Excellent communication and organizational skills
- Demonstration of research experience
- Strong knowledge of XXXX, indications, treatment planning, imaging, etc., physiology, disease progression and management of radiation therapy related side effects
- Awareness of legislation relevant to the position
- Willing to work towards APRT(T) certification with the CAMRT
- Have or be willing to seek an academic appointment with the University of Toronto Department of Radiation Oncology

APPENDIX D: PRIOR LEARNING ASSESSMENT AND RECOGNITION

Prior learning assessment and recognition (PLAR) is based on a belief/value system that supports opportunities for individuals to have all relevant learning recognized and counted towards a qualification. It is consistent with other strategies that support diverse and inclusive pathways to lifelong learning.

PLAR is a process that identifies, verifies, and recognizes learning (knowledge and skills) that cannot be fully recognized through other means. To be recognized, prior learning must be appropriate to the context in which it is accepted and have an adequate balance between theory and practical application.

In North America, the concept of assessing and recognizing prior learning began in the 1940's when American universities began to explore ways to credit the experiential learning of military personnel returning from World War ll. Since the 1980's, support for the concept has grown in countries around the world. It is known by several different names, and is applied in a variety of ways but it has been based on the single foundational belief that learning acquired outside the classroom has value and should be recognized.

Today PLAR is used by Canadian colleges, universities, regulatory bodies and employers. In this Project, it will be used to identify advanced knowledge and skills of radiation therapists, and assess whether they have the competencies required to be Clinical Specialist Radiation Therapists.

A number of assessment methods and tools will be used to identify and verify candidates' knowledge and skills, including portfolio assessment, case studies, observation, and interviews.

Reference: CAMRT Advanced Practice Registered Technologist (Radiation Therapy) Competency Profile: https://www.camrt.ca/wp-content/uploads/2019/01/APRTT-Competency-Profile-2018-11-FINAL.pdf

APPENDIX E: IMPLEMENTATION PLAN FOR THE INTRODUCTION OF CLINICAL SPECIALIST RADIATION THERAPIST

Preparatory Period	Phase I	Phase II	Phase III
With input from the principal supervisor and the CSRT candidate ➢ Identify level 1/2/3 competencies ➢ Outline initial responsibilities and learning goals, establish target timelines ➢ Establish schedule for progress meetings With input from the principal supervisor and clinical educator ➢ Define candidate objectives ➢ Identify requirements and ensure access to learning/training ➢ Determine assessment methods ➢ Design evaluation tools to document progress for inclusion in portfolio ➢ Define workload expectations ➢ Establish measurement tools for performance indicators of role effectiveness	Attain and demonstrate level 1 competencies Using a model of supervised learning: ➢ Introduce level 1 competencies into practice ➢ Evaluate performance of level 1 responsibilities Work towards level 2/3 competencies	Attain and demonstrate level 2 competencies Transitioning to a model of preceptorship for level 1 and using a model of supervised learning for level 2 ➢ Introduce level 2 competencies into practice ➢ Evaluate performance of level 1 and 2 responsibilities Work towards level 3 competencies	Attain and demonstrate level 3 competencies Using a model of preceptorship for level 1 and 2 and supervised learning for level 3 ➢ Introduce level 3 competencies into practice ➢ Evaluate performance of level 1, 2, and 3 responsibilities Work on outstanding and newly defined competencies

Target timelines:

Phase I- within 3-6 months

Phase II – within 9-12 months

Phase III – within 18 –24 months Full

Role Implementation at 2 years

Build CSRT advanced competencies for APRT(T) certification

APPENDIX F: Frequently Asked Questions

***QUESTION**: I have a great idea for an advanced practice radiation therapy role – how will I know if it would it work?*

Answer: Having an idea is a great place to start! There are several considerations to take into account to develop your pitch for this role. They are:

Address a need: The **MOST IMPORTANT** thing you need to confirm is that the role you envision somehow addresses a genuine service gap or process bottleneck. All radiation therapy departments collect data that shows where things are working smoothly and where things need to be improved. If you have an idea, chances are you have seen an issue that needs addressing so you need to do your homework. Work with your management/administrators to identify/collect the data that provides evidence there is a service problem. Examples of data you may want to review include wait times for consultation data, patient satisfaction data, machine utilization data, referral patterns in your region, rate of plan rejection, etc. REMEMBER: no gap = no chance.

Make sure it has a radiation therapy focus: You must also make sure that the activities/competencies that are required to fix this gap are suited for advanced radiation therapy practice. There is no point in fighting for a job that a social worker or pharmacist can do. Radiation therapists have unique knowledge and a very specialized set of skills that can be capitalized upon to improve the effectiveness and efficiency of the radiation therapy process. The role you are developing MUST build on that scope of practice. This is not to say that it can't move beyond scope by adding additional skills/competencies that makes the process more efficient or provides a better experience for the patient, but that the core practice should remain somewhere along the radiation therapy workflow. For example, in some centres, nurses perform the weekly "on treatment" review. The lens they use for this assessment is very different than might be used by an advanced practice radiation therapist. In patient populations with complex radiation therapy techniques, it might be worthwhile to have an APRT conduct these reviews (either as the sole review or in concert with other professionals) to evaluate patient response to treatment and, where necessary, initiate changes in treatment plan to account for unexpected side effects, changes in anatomy, etc.

Review the literature. Advanced practice in radiation therapy is growing around the world. There is a chance that someone else has been thinking about/doing something similar to what you want to do. You can learn a lot from what other people have written about – especially when it comes to how to characterize/measure success. You can also look outside of radiation therapy literature for activities that are more generic in nature – for example, patient experience/satisfaction is a common issue in many aspects of health care. You could learn how a nurse measured her impact on patient experience and adopt/adapt the tool that investigator used.

Make it relevant: Ensure you tie the potential of the new role to the organization's strategic plan or direction. There is no point creating a role that doesn't advance the local agenda. For example, envisioning a role that is tied to patients receiving a specific treatment technique (for example, standardized fractionation for prostate radiation therapy) when the department is moving in the direction of more hypofractionated radiotherapy wouldn't make sense.

***QUESTION**: What would help make the development and implementation of this role successful?*

Answer: In most cases, it is wise to propose starting with a "pilot project". This phase is designed to provide the necessary time to collect evidence that the role is working. There should be clear outcomes set that are measurable and make sense given the service gap identified and being addressed. Several resources can help enhance the chance of success of your pilot project. There are documents and models that outline approaches to take. In our project, the PEPPA Framework was a huge help to the steps to follow when building a new role. This tool kit is an abbreviated form of that with the key steps outlined. The Framework itself is a huge document with much more robust references and resources if you want to access more information. The World Health Organization (WHO) published a document in 2011 called "Beginning with the end in mind: Planning pilot projects and other programmatic research for successful scaling up". While we didn't have this document at the beginning of our CSRT Project, once it was available, we used it to reflect on what we had done and what we had missed the mark on. It would serve as an excellent check list of "to dos" for building a new advanced practice role.

Some of the most important lessons we learned that are essential to success are:

Internal support: For a new role, the neophyte APRT needs dedicated and staunch support. It includes practice supervision/coaching/teaching, both professional and personal support, and mentorship from a supportive radiation oncologist (in most cases). So, a VITAL first step is to identify an RO who sees the advantages of the role to their practice and/or patient population. This RO will need to champion the role with colleagues, but also provide hours of guidance and education. This is probably THE most important element for a successful role.

TIP – once you have identified the RO(s) that will champion your pilot position, you should reach out to have them connect with ROs in Ontario who worked with/mentored/taught CSRTs here in Ontario. In our experience, ROs listen best to other ROs so this will help address RO-type questions, help shape expectations, alleviate concerns, and develop strategies for success.

Communicate "ad nauseam" – In the literature, the most identified barrier to implementing a new role/technique/system is lack of communication/clarity about what is happening. You CANNOT underestimate the frequency and number of stakeholder groups you will need to talk to. And you should start talking to people long before you formalize your idea or pitch. This is the number one key to success – talk, talk, talk. You should create a map of all the stakeholder groups that need input and create a timeline and methods for communication. Meeting with

these groups as your idea takes shape helps give you fresh perspectives and helps you hone your plan. You then need to communicate regularly with these groups over the course of implementation. This can take the shape of a meeting, a newsletter, a regularly scheduled report, a presentation, etc. You must also create a mechanism to receive feedback/questions/concerns from members of these groups – communication cannot be unidirectional.

TIP – there is a long list of people involved in and aligned with the radiation therapy process. These include the professionals that work with the patients, but also those that work behind the scenes and administrators and managers. Probably your most important stakeholder group is your patients and you should always ensure you find a way to make sure you measure their satisfaction if you are providing front line care.

QUESTION: *What about funding?*

Answer: You will see from above (and reviewing the WHO organization publication) that funding is a key element to be addressed to ensure long-term sustainability of a new initiative. It may be that the nature of the funding you start the project with is not the funding you eventually receive/access, but you have to ensure you have looked at both short and long-term sources before launching a pilot project. It is usually easiest to find funding attached to either local and provincial initiatives (for example, improving access to palliative radiation therapy, streamlining the care for patients receiving concurrent chemotherapy and radiation therapy, etc.) or associated with a larger, funded research project (for example, improving outcomes for patients receiving chemo-rads for H&N cancer, increasing access to care to underserviced populations, etc.). There are creative ways to look at funding as well and with input from supportive colleagues and mentors, you may be able to tap into a less common funding source likes grants, fellowships, private donors, etc. You should ensure that whatever the short term funding is for the pilot project, that it is for long enough for you to collect evidence of impact. Evidence of positive impact aligned with stated impact will be the leverage you need to identify and secure longer term funding.

QUESTION: *I looked at the criteria - the role I have in mind requires expert clinical skills but wouldn't involve any research or leadership. Is that okay?*

Answer: There are a lot of roles that might be considered expanded or enhanced - and these are really important to the system in many circumstances (e.g., introducing a new technology). However, an advanced practice role would necessitate the inclusion all areas of the advanced practice competency profile as published by the CAMRT. It might be that those research and leadership activities are put on hold while you develop the advanced clinical skills but it should be the end goal that the role is well rounded in all the domains of the profile. It might even be necessary to sketch out how your time will be used across the three domains – clinical, technical, professional – when the role is fully implemented.