Radiation therapist-led weekly patient treatment reviews

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Abstract The purpose of this discussion article is to explore the implementation of radiation therapist-led treatment reviews as a form of advanced practice for radiation therapists in Australia. The feasibility of such a role, the impact on cancer care services and implementation requirements to enable the position to be implemented effectively in an Australian environment are explored. Current practice involving weekly patient treatment reviews and cases where health professionals other than radiation oncologists have undertaken this role will be evaluated. Recommendations on its implementation in an Australian environment are also given. An extensive literature review was conducted through the databases ScienceDirect, Medline and CINAHL. Searches were carried out using the following keywords; “radi*” and “prescribing”, “radi*” and “patient review” and “radi*” and “role development”. Abstracts of the yielded results were appraised and those that matched criteria for analysis underwent critical review for inclusion in the discussion. Although steps have been taken to implement the advanced practice role of a treatment review radiation therapist in Australia, little has been done to formalise the role. It is evident from the international literature that the radiation therapist-led reviewer role has resulted in benefits to patients, medical specialists and therapists. This advanced practice role has the potential to increase radiation therapist retention and recruitment. Implementation of this role in the Australian environment would be advantageous; however criteria outlining the scope of practice and remuneration packages need to be established to facilitate the synthesis of this role in a clinical environment.

Keywords: Australian, patient treatment review, radiation therapy, radiation therapist, role expansion.

Background Radiation therapy is one of the three major treatment modalities used in cancer management. Approximately 50% of all cancer patients will require radiation therapy at some stage of their treatment. Radiation therapists (RTs), radiation oncologists (ROs), medical physicists and nurses form the core of the multidisciplinary team involved in radiation therapy treatment. RTs are responsible for the technical delivery of the radiation treatment as prescribed by an RO. This consists of localising the tumour volume, treatment course planning, delivery and verification of the treatment and informal patient assessment. The dynamic nature of this field also requires RTs to assist in the development of the profession and participate in lifelong learning. In Australia, obtaining a qualification to become a registered RT is via the Accredited Practitioner pathway involving both an academic qualification (Bachelor Degree or Graduate Entry Masters) and appropriate clinical experience.

Currently, the Australian healthcare system is experiencing an annual increase in the number of cancer patients, a shortage of healthcare workers (in particular medical specialists), economic restraints and rapid advances in new technology. This has led to governments and local health services world-wide looking to advanced practice in an attempt to resolve these issues. Advanced practice is the development of health care professionals with advanced skills or roles which are beyond their current scope of practice and may require postgraduate study.

Although advanced practice is a global movement, in Australia little progress has been made towards the development of any formally recognised advanced practice roles for RTs. The Australian Institute of Radiography, the professional body for radiographers, radiation therapists and sonographers in Australia, began the trend towards advanced practice roles with the release of its Professional Advancement Working Party Report. In this report the Institute not only noted the expected benefits to patients, the healthcare team and RTs from participating in advanced practice, but also proposed a potential career pathway towards these roles. The working party suggested a new hierarchical career structure for practitioners and acknowledged that post-graduate education would underpin future extended roles. It was suggested that if this issue is not swiftly addressed, the opportunity for role expansion by RTs may be lost to other healthcare professions.

A potential opportunity for RTs in Australia to become involved in advanced practice is RT-led weekly patient treatment reviews. The weekly treatment review is a routine component of care for patients undergoing radiation therapy and is commonly performed by the RO or their registrar. The reviews aim to provide holistic care, monitoring and management of potential side effects, education regarding symptom management and an opportunity for the patient to have any personal, social or psychological problems which they are experiencing addressed. The treatment reviews also play a role in quality assurance by ensuring that the treatment is progressing as planned.

Recently, the efficacy of having an RO perform the treatment reviews has been questioned. Their ability to undertake reviews which address all of the aforementioned areas may be undermined because of the time limitations they face and perceptions held by both the patients and ROs regarding the role of the review and its content. In light of this, RTs potentially could be better suited to perform this role. Currently RTs, as part of their role, informally assess their patients daily prior to each treatment and extend this role into formalised RT-led weekly treatment reviews could benefit the patient, multidisciplinary team and healthcare system. This extended role has already been implemented successfully in a number of departments in the United Kingdom.
The aim of this article is to discuss the possibility of role expansion by RTs into RT-led weekly patient treatment reviews in Australian radiation therapy centres. Current practices involving weekly patient treatment reviews and cases where health professionals other than ROs have undertaken this role are considered. In addition the potential outcomes of this role and the requirements for its effective implementation will be examined. Consideration of the potential of the RT reviewer position in Australian cancer care services, its feasibility as well as what may be required to ensure that the position is implemented effectively will be undertaken.

Method

A review of current literature available on this topic was undertaken using online databases including CINAHL, Medline and ScienceDirect. Searches were carried out using the following keywords; “radi” and “prescribing”, “radi*” and “patient review” and “radi” and “role development”. This resulted in an initial collection of literature from which abstracts were reviewed to select articles for further analysis. Additional articles were collected by reviewing the reference lists and selecting the “view related/similar article” feature. The inclusion criteria for selection of all the articles were that they related to role expansion into weekly treatment reviews led by RTs or health care professionals other than ROs and were recent publications (2000–2008) from peer reviewed journals or professional body publications. The compiled articles were then critically analysed by the authors for use in this discussion article.

Discussion

Benefits to the patient

The primary aim when considering the implementation of a new role in patient care is to ensure that it ultimately proves beneficial to the patient. Roles traditionally undertaken by health professionals are less likely to be defined by traditional boundaries and are increasingly becoming more of a “team approach”. The rationale behind the appointment of ROs as treatment reviewers is based on the theory that they are highly trained medical specialists, and the most appropriate professional to review the patient during treatment. This reasoning fails to acknowledge the role of the treatment review as not only a medical assessment and a source for advice on treatment reactions for the patient, but also as an opportunity for the patient and their carers to discuss and address their informational, psychological and social needs. Considering this, the role of the reviewer is broad including, but not limited to, information provider, medical specialist, counsellor, patient advocate and friend. The reviewer needs to be skilled to competently address all areas encouraging open communication and providing appropriate resources to support the patient.

A failure to address the non-medical aspects of patient care and long waiting times endured by patients are negative by-products of the limited time ROs have for treatment reviews. In addition, some ROs have stated that they do not deal with the non-medical concerns of patients not only because of time restraints but also because of the lack of relevance to a “medical” review; with some even considering themselves as not being the appropriate professional to deal with these issues. The focus of ROs on the medical side of treatment reviews seems misdirected particularly in the assessment of patients undergoing treatments to areas such as the breast, which require low levels of medical intervention while the patient still requires considerable psychosocial support. There is a perception among RTs that patients view the ROs as having less time and are less empathetic and therefore patients are likely to communicate more openly with RTs than a RO in a treatment review setting. The ROs also see themselves as more accessible and closer to patients, which facilitates communication, particularly concerning issues which may appear trivial to ask an RO. The impact of this on patients is that many are reluctant to seek support from the RO for “non-medical” issues because they perceive these concerns to be inappropriate or of little significance to bring up in a treatment review with an RO who may have very limited time to deal with these concerns. Patients then attempt to cope with these concerns by themselves and do not seek further support from other cancer care professionals. Given the suggested lack of comprehensive treatment review by ROs due to patient perceptions, time limitations and a limited need in some cases for medical intervention, another health professional such as an RT may be better suited to this role.

Various studies suggest that RTs and ROs consider that RTs are capable of undertaking the role of treatment reviewer. It is a tendency for RTs’ perception of their ability in this role to be higher than the ROs’ perception of RT reviewer ability. It is important to note that perception of capability does not necessarily equate to competency. The reviewer needs to possess the ability to determine where their own capabilities are sufficient to care for the patient or when specialist intervention is required. ROs may be hesitant in handing over the treatment review role if they are not confident that RTs can recognise their limitations and refer the patient when necessary. The implementation of safeguards ensures a high standard of patient care and are a solution to the ROs’ hesitations about this role development. In one study, a policy was employed where the RO was required to assess the patient at least once during their treatment, to maintain some control over the review process. At the Beatson West of Scotland Cancer Care Centre, the Radiation Therapy Oncology Group scoring tool was used by the specialised nurse or RT reviewers, to assess skin reactions and their appropriate management. At the Bristol Haematology and Oncology Centre, RTs are responsible for prescribing medication for the treatment of side effects using an evidence based protocol. These protocols helped to ensure that patients receive adequate medical attention and appropriate advice throughout treatment and also facilitated the decision making process for referrals.

Limitations of RTs as patient reviewers

The limitations of RT reviewers, such as the challenge of making complex medical decisions during review, need to be considered when defining the scope of practice for RT reviewers in the Australian setting. A lack of a clear definition of the role and its boundaries may cause anxiety and stress to the practitioner. Patients should be aware of the reviewer’s scope of practice as they may feel less comfortable if they believe the reviewer has not had the necessary training for that particular role. Patients raised concerns regarding the appropriateness of nurses leading follow-up clinics for breast treatments as they were unsure of the nurses’ exact role, abilities and training and this resulted in patients not feeling comfortable. As nurses and RTs have different training backgrounds they may be perceived differently by patients and this potentially makes RTs more suitable as treatment reviewers if the patient feels they have more appropriate knowledge and skills. It is therefore necessary that before these roles are implemented, clear boundaries of the
scope of practice are defined for all parties involved.

Not all sites of treatment require a high level of medical intervention, which further supports the concept that ROs are not necessarily required to perform treatment reviews. Some ROs believe that reviews consist of too many medically-related questions which RTs are incapable of answering. This view is contradicted by a study which found that medical intervention, such as wound dressing and drug-related enquiries, was only required in 35% of reviews; however, this was only a small study of two radiation therapy centres and further research specifically in the Australian setting is required. Side effects for some treatment sites are also predictable and require minimal medical intervention compared to other sites. For example, sites such as the breast have been identified in one study as only requiring referral for medical intervention in 7.6% of cases. If it is a concern that excessive medical intervention will be required, these patients could be assigned to ROs instead of RT treatment reviewers.

Radiation therapy treatment to sites such as the pelvis, brain and head and neck require comparatively higher levels of intervention. However, this may not necessarily exclude RTs from reviewing these patients. A study from the UK documenting nurse-led treatment reviews of head and neck patients found that the introduction was effective without compromising the medical management of side effects. Although this treatment site is considered complex and requires a high degree of medical intervention, appropriate protocols were established by the ROs to facilitate the reviewers’ practice. It may therefore be possible to involve RTs in the treatment reviews of patients requiring high levels of medical intervention if appropriate protocols are established to support this role.

Reduced waiting times and a multidisciplinary approach to cancer care have been noted benefits for patients as a result of nurse and RT-led treatment reviews. Currently, patients who have developed side effects and require a review by an RO may have to wait extended periods of time due to the busy workload and time restraints that ROs face. By implementing RTs as treatment reviewers for patients who are less likely to require medical intervention, the ROs will have a decreased workload and will therefore be able to focus on patients who require greater levels of medical intervention.

Patient preferences

Patients are not necessarily opposed to the idea of a non-medical treatment reviewer. In the results of one study into nurse-led treatment reviews, all of the patients stated that they did not prefer to see their RO instead of the nurse. Most of these patients’ comments reflected a common view that the role of the review was to have someone there to explain what would happen during and after treatment in order to help the patient know what to expect. Another study from the UK which examined both nurse-led and RT-led treatment reviews from a patient’s perspective, found that 99.7% of the 865 patients surveyed were highly satisfied with the time they were able to spend with the nurse or RT review staff and 99.1% said they felt able to discuss all aspects of treatment and any other concerns with these reviewers. This is particularly encouraging when it is compared to patients feeling unable to discuss all areas of their care and feeling that they have limited time when being reviewed by the RO.

The satisfaction that patients have with RTs as reviewers could stem from the daily contact RTs have with the patient during treatment. Some have concluded that this allows the gradual development of a strong relationship which results in more open communication with the RTs during treatment reviews. It should be noted that these conclusions are limited because they are based solely on the perceptions of the RTs and ROs, rather than those of the patient, which may provide unreliable or biased results. If the reviewers specialise in treatment review, and do not interact with the patient daily during treatment, their ability to gradually build a relationship from this regular contact is minimised. It is therefore important to consider how this role is implemented and whether staff will practice exclusively as treatment reviewers or if this will be incorporated into the role of RT treatment staff.

Financial aspects

The cost of staff undertaking the role of treatment reviewer needs to be considered when determining who is better suited for the role. The high cost of employing an RO must be noted. It has been found that nurses can lead treatment reviews and perform all the associated administrative tasks relatively independently while ROs require one or two doctors and one to three nurses when undertaking treatment reviews. This may support the idea that it would be more cost-effective if ROs did not perform treatment reviews. However, a more comprehensive review of the costs involved in a non-RO review, specifically an RT reviewer in the Australian healthcare system, should be undertaken. That is the overall costs should be considered such as the time spent with patients, and medications prescribed.

Evidence based

In order to make a well-informed judgement on the suitability of a practitioner for the treatment reviewer role it is necessary to base this decision on reliable evidence which shows improved patient outcomes. Studies into the outcomes of nurse-led and RT-led treatment reviews found very positive outcomes for patients including improved communication, decreased patient waiting times and a more consistent approach to the monitoring and management of the patient through the increased use of evidence-based protocols. This resulted in improved psychosocial support, a more holistic assessment of the patient, improved management of treatment side effects and improved continuity of care. The study conducted at the Beatson West of Scotland Cancer Care Centre, which evaluated nurse- and RT-led treatment reviews from a patient’s perspective, found that 99.7% of the 865 patients surveyed were highly satisfied with the time they were able to spend with the nurse or RT review staff and 99.1% said they felt able to discuss all aspects of treatment and any other concerns with these reviewers. This is particularly encouraging when it is compared to patients feeling unable to discuss all areas of their care and feeling that they have limited time when being reviewed by the RO.

The results of RT-led treatment reviews are not only beneficial for patients, but also for individual RTs and for role extension in the profession. RTs found that being involved in advanced practice by undertaking treatment reviews resulted in increased involvement in patient care, higher levels of autonomy, increased diversity involved with the role and more lateral movement within the RT profession. This in turn resulted in increased job satisfaction, confidence, collaboration with other professionals, and satisfaction with their role in patient care.
comes for individual staff have a subsequent effect on improving recruitment and retention of staff.7,4,10,25

Legal and other concerns

Although there are many benefits associated with this role, there are some concerns regarding the associated increase in responsibility, accountability and potential legal and ethical concerns. This is particularly true if appropriate pathways to this role are not clearly defined.26 Various authors have found that appropriate education and qualification routes as well as support and funding in the clinical environment are required when developing this role.26-28 This development requires the involvement of tertiary institutions, radiation therapy centres and professional bodies.28 To implement a clearly defined education pathway some centres gave RT treatment reviewers formal education such as lecture or postgraduate education relating to cancer management, counselling and side effect management. The RTs then observed review clinics with ROs and were assessed on their competency by a recognised specialist.29 These clear routes of development enabled the practitioner to proficiently undertake the role and were found to ensure that they were educated, trained and accredited appropriately.2,18 The implementation of such processes is essential in the development of competent RT treatment reviewers in the Australian health care setting.

It is important to ensure that RT treatment reviewers are appropriately recognised and remunerated in their role.2,3,8-10,27 Diagnostic radiographers in the UK experienced difficulties in being given appropriate formal recognition and remuneration for advanced practice roles because their professional body failed to appropriately adapt definitions of the classification of roles.30 The Professional Accreditation Working Party report could assist in avoiding such issues in Australia as it clearly sets out a three-tier structure with unambiguous definitions regarding requirements to attain the varying levels of practice for RTs.4 This will also facilitate the future creation of appropriate remuneration scales and should be taken into consideration when calculating the financial cost of a RT reviewer as opposed to an RO reviewer.

It is important to ensure that the implementation of this role does not impact negatively on the inter-professional relationships between healthcare professionals. Communication and appropriate role definition between these groups will assist in reducing initial resistance to advanced practice and will ensure continued support for the role by all professionals. It has been noted that resistance against staff undertaking advanced practice roles is commonly due to a lack of understanding, knowledge and respect of what the role entails and a belief that the new role will be an encroachment on another professional’s area of practice.2,26 To ensure an acceptance of the treatment reviewer role, structured and effective communication is required to clarify the definition of professional boundaries and practice.26 This leads to a reduction in this professional protectionism and ensures a harmonious working relationship between health care practitioners and may eventually result in improved relationships between these health care professionals.2,9-28

Recommendations

Given the potential benefits to patients, ROs, RTs and the wider cancer care service discussed in this article, it is recommended that the introduction and formalisation of RT-led weekly treatment reviews in Australia should be further investigated with a view to implementation.

To ensure that this role is effectively implemented in the Australian clinical environment, it is necessary for all stakeholders including RTs, patients, ROs, multidisciplinary team members, tertiary institutions and professional bodies to work in collaboration. Training involving formal lectures, postgraduate education, clinic observations and competency assessment of RT treatment reviewers should be standardised to ensure consistency in skills and knowledge and that these are transferable between radiation therapy departments.

It is recommended that the Professional Accreditation Working Party report is used to form the basis of education and qualification requirements for RT treatment reviewers, such as the requirement of a master’s degree or higher qualification to undertake this role. The use of this report is also suggested to define the scope of practice and also provide a clear structure for career progression in this area. It is also necessary for appropriate remuneration to be determined.

The literature suggests that patients undergoing breast radiation therapy require the least medical intervention. RT-led review clinics in Australia for patients with breast cancer are therefore recommended for the initial implementation of the treatment reviewer role. It is also recommended that further investigation into levels of medical intervention for different treatment sites is undertaken. From this information conclusions can be drawn on which sites are the most appropriate for RT-led treatment review in order to address concerns that RTs have some limited abilities in the medical aspects of treatment reviews.

Evidence based protocols regarding the appropriate assessment and management of treatment side effects should also be implemented to ensure that the RT can appropriately care for the patient and make referrals to specialists when required. It is also recommended that the review protocols ensure that patients see the RO at least once during the course of treatment. If the role is to be implemented in Australia, research into the implementation and assessment of the outcomes is essential. Assessment in relation to the quality of patient care, impact on the multidisciplinary cancer care team and cost would be particularly useful. After the role has been firmly established, research into extending the reviewer’s role to areas such as limited prescription of medication to relieve side effects could be considered.

Extending the role of RTs into weekly patient treatment reviews requires careful and prompt consideration. This is not only to ensure that this potential opportunity to improve patient care is achieved but also to ensure that further development of the radiation therapy profession is not lost to other health professionals.

Conclusion

The implementation of the RT treatment reviewer role into the Australian radiation therapy clinical environment is likely to result in positive outcomes for patients, RTs and the wider multidisciplinary cancer care team. With further education, RTs have the potential to effectively undertake the role of treatment reviewer. Careful consideration of the potential problems surrounding the role, such as appropriate education, need to be considered prior to its implementation. In addition to this, by ensuring that the requirements for undertaking such roles are clearly defined, the role can be effectively introduced with minimal resistance from other health care professionals. The use of evidence based protocols and safeguards assist in ensuring that a high standard of care is maintained. Standardisation of the role through education and role definition would allow the skills and knowledge of the reviewer to be transferable between treatment centres allowing greater flexibility in the workplace. The imple-
mentation of this role into the Australian radiation therapy environment requires planning and further research, but will result in the benefits seen in the literature.

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References
3 Lees L. The role of the “on treatment” review radiographer: what are the requirements? J Radiother Pract 2008; 7 (3): 113.