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Research article

Navigating uncertainty: The implementation of Australian radiation therapy advanced practitioners

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ABSTRACT

Radiation therapy advanced practice has been implemented in several international jurisdictions; however, it is yet to be systematically integrated into Australian radiation oncology centres. This paper presents the outcomes of a doctoral research study to explore the factors that may be influencing the implementation of radiation therapy advanced practice in Australia. Using a constructivist grounded theory methodological approach to guide procedures, data collection occurred via 6 nationally facilitated online (video mediated) focus groups, and during interviews and observations at 5 purposively selected clinical case study locations. Data analysis led to the development of a grounded theory 'navigating uncertainty' to describe the process influencing the implementation of radiation therapy advanced practice in Australia. Navigating uncertainty is explained by three inter-related contextual processes of *conceptualising radiation therapy advanced practice*, *integrating radiation therapy advanced practice*, and *becoming the radiation therapy advanced practitioner*. The research suggests that the process of actively finding a way to accommodate uncertainty is necessary for advanced practice implementation objectives to be realised.

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Introduction

Implementing extended scope of practice roles for health professionals as a mechanism of health workforce redesign is an opportunity to enhance service delivery and improve the patient care pathway. In radiation oncology centres specifically, radiation therapists (RT) performing advanced practitioner roles were introduced in the United Kingdom at the turn of the century [1], and in the Canadian province of Ontario shortly after [2]. Discussion papers, frameworks elaborating expectations of practice and formal recognition pathways exist across multiple jurisdictions [3–8], and many reports of local practice outcomes as a result of radiation therapy advanced practitioner implementation have been published during the last two decades [9–23].

Health workforce redesign and redistribution of skills across professional groups have been proposed as a viable strategy to support the predicted increase in demand for health services and cancer care in Australia [24–29]. However, despite such recom-

mendations and growing international evidence of successful outcomes, the implementation of radiation therapy advanced practitioners (RTAP) in Australia has been sporadic and isolated to a few discrete centres. Feasibility studies exploring advanced practice opportunities have been reported [30–32], however there is little evidence of RTAP roles functioning in practice [17,18]. During the last two decades the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) has released several discussion papers and a pathway for the recognition and accreditation of RTAP [5,33–35], however wide scale, systematic implementation across radiation oncology centres is yet to be observed [36]. If progress is to be made in this area and the anticipated benefits realised, it is vital to better understand the factors that may be surrounding the tenuous implementation of RTAP in Australia.

Concern with this issue was the driver to undertake a qualitative research study with the aim to understand the influencing factors shaping the implementation and process of radiation therapy advanced practice in Australia. The research focus was to explore the perspectives and 'lived experience' of those who may be involved in RTAP implementation strategies and outcomes – namely the RT, radiation oncologist (RO), radiation oncology medical physicist (ROMP), and the self-identified or contextually

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recognised RTAP. This article will report the outcomes of this research, with a view to encourage action towards the more systematic implementation of radiation therapy advanced practice in Australia.

Materials and methods

The research was situated in an interpretive theoretical framework and used a constructivist grounded theory methodological approach to guide data collection and analysis procedures [37,38]. Data collection was carried out in two phases, with inductive data analysis and constant comparison of the accumulative data sets occurring throughout the research process. Each research phase was approved by the Monash University Human Research Ethics Committee (CF15/2627 – 2,015,001,077 and CF16/507 – 2016000247). Where required, additional approval was obtained from local hospital ethics review boards prior to Phase 2. All participants were provided with an explanatory statement and completed consent processes prior to engagement in any research activity.

Phase 1: Focus groups

The first phase involved six online, video supported focus groups with national participation from 14 Australian RTAP, RT, RO, and ROMP. Focus groups were selected to establish a baseline understanding of the broader perceptions of RTAP and to guide data collection in the later phase [39]. Their intent was to identify the perceptions and assumptions associated with radiation therapy advanced practice and RTAP, as well as identify perceptions associated with the implementation of RTAP. This phase of the research has been reported in detail by the authors elsewhere [40].

Phase 2: Case studies

The second phase used a multiple site case study approach to gain a deeper understanding of radiation therapy advanced practice within the context of the radiation therapy workplace. This approach enabled the in-depth exploration of each individual case situated within an authentic context, intertwined with a collective analysis of all cases to enhance broader conceptual understanding of the study area [41]. The intent of this phase was to further explore the perceptions and assumptions associated with RTAP implementation and practice, as well as to understand the contextual experience of RTAP implementation and outcomes. The case study sites were 5 purposively selected radiation oncology centres in Australia which were professionally known to have an interest in the implementation of RTAP, and that also represented diversity in location, capacity, referral base and funding mechanism. Data collection occurred with the researcher (first author KM) on-site within each centre for several days and was approached flexibly and opportunistically to suit the needs of the workplace and to extend the emergent analysis using theoretical sampling [38]. Data collection strategies included 39 semi-structured interviews with RTAP, RT, RO and ROMP; observation of inter-professional interactions between the RTAP and others; and RTAP associated document review.

Data management strategies

Focus group discussions were video and audio recorded, and case study interviews audio recorded. Recordings were transcribed verbatim into documents, with all research participants and case study sites described by an anonymous identifier. Researcher hand-written notes of focus group and interview proceedings, case

study observations, documents and researcher reflexive memos were transcribed and de-identified for analysis. Data analysis procedures were aligned with a constructivist grounded theory methodology, and sorting of categories, codes and data was supported by Microsoft Word and QSR NVivo 12. Peer review analysis by experienced qualitative researchers of a sample of de-identified transcripts was actioned periodically throughout the process to support credibility of findings [42]. The emergent categories were also verified and extended through discussion with RTAP and RT manager case study participants whilst on site during data collection. Saturation, as defined by reaching conceptual completeness of categories that form the grounded theory [38], was achieved from the combined data set.

Results

The overarching multi-dimensional process influencing the implementation of RTAP in Australia in this study was one of **Navigating Uncertainty** (see Fig. 1). According to the data, uncertainty arises as a result of the advanced practitioner being different from the radiation therapist, in functionality, fit, and role meaning. Navigating uncertainty refers to the process whereby practitioners (RTAP, RT, RO and ROMP), individually and collectively, interpreted and attempted to reconcile the perceived or actual impact and influence – personal, functional, structural and cultural – of RTAP implementation within their local context. For the RTAP, navigating uncertainty was also apparent in the process of reconciling the change in professional identity, from being the RT to becoming the RTAP. Navigating uncertainty was a continual process, present from the first consideration of the possibility of RTAP implementation through to and including achieving an established role. Strategic and purposeful actions to implement radiation therapy advanced practice whilst experiencing ongoing uncertainty were necessary to achieve a successful implementation outcome.

Three interrelated and contextually defined key categories explain the grounded theory of navigating uncertainty in relation to the implementation of RTAP in Australia: *Conceptualising radiation therapy advanced practice*; *Integrating radiation therapy advanced practice*; and *Becoming the radiation therapy advanced practitioner*. The sub-category processes informing each of these key categories, with defined properties and illustrative data, are presented in Tables 1–3. Generic data identifiers have been described in tables to preserve anonymity. Additionally, sub-categories with quotation marks in the figure and tables have been drawn from in-vivo codes.

Conceptualising radiation therapy advanced practice

Conceptualising radiation therapy advanced practice is the process of defining what advanced practice might mean within the context of a given centre. Broad understanding of radiation therapy advanced practice was apparent in the data, but the perceived impact and influence on a practitioner's own workplace varied. Practitioners initiated a process of contemplating the frame and significance of the RTAP in relation to title, expectations, and fit to other work roles within their local context. The scarcity of RTAP roles in Australia, ill-defined state-based employment frameworks in relation to advanced practice positions, and the absence of a recognised professional title required practitioners to decide what advanced practice might mean to them, individually and in the context of their centre. Broad concordance of meaning was apparent in describing the RTAP as having expert clinical skills and independence in their practice, as well as capacity for leadership, quality improvement and training delivery. However, conceptualising the contextual fit within each workplace was challenging,



Fig. 1. Conceptual diagram of the grounded theory Navigating Uncertainty that explains the implementation of radiation therapy advanced practitioners in Australia. RT-AP = radiation therapy advanced practice; RTAP = radiation therapy advanced practitioner.

with uncertainty arising in framing a title; determining structure and expectations of role performance; and finding a place among and alongside other radiation therapists. Additionally, uncertainty was compounded trying to assimilate the influence of constant innovation of radiation therapy delivery on anticipated RTAP role outcomes. The diversity in conceptualisation of advanced practice among practitioners in turn created further uncertainty - this was shown to influence conflicting ideals of meaning between individuals, including at times those within the same centre.

Conceptualising advanced practice was assisted when practitioners contextualised how a RTAP might enhance patient access and improve service delivery, as well as augment the radiation therapist career pathway. Practitioners looked to examples from radiation therapy advanced practice internationally, and to other advanced health professional roles within Australia to inform this strategy. Despite this action however, implementation did not always progress as contextual uncertainty of how to achieve the desired end point remained.

The sub-category processes informing conceptualising radiation therapy advanced practice are presented in [Table 1](#).

Integrating radiation therapy advanced practice

Integrating radiation therapy advanced practice is the multi-faceted process of implementing the developing advanced practice concept into the local context, with a view to achieve the anticipated outcome. Integrating radiation therapy advanced practice is a disordered and non-linear process that occurs over time, influenced by inter-related practical, social, conceptual and contextual factors. Navigating uncertainty was intertwined throughout the integration process as practitioners attempted to reconcile complex adjustments to work, relationships and professional identity as a result of RTAP implementation.

Within this data, the process of integrating radiation therapy advanced practice was not demonstrated to reach an end point, irrespective of the outcomes achieved by RTAP implementation.

Table 1

Conceptualising radiation therapy advanced practice sub-category properties and illustrative data. CS = Case Study; FG = Focus Group; RT = radiation therapist; RTAP = radiation therapy advanced practitioner; RO = radiation oncologist.

Sub-Category	Properties	Illustrative data
Framing meaning	Practitioners individually and collectively frame the perceived significance of the RTAP role in relation to title, expectations and fit within their local context. The meaning of advanced practice and the RTAP may be shared between individuals or may be in conflict.	<i>“Because I think, in a way, it’s alright them saying, ‘Oh, you must do this, this, this, this’, but how would you actually do [advanced practice]. . . and I guess every centre is different as well, and how they would. . . locally kind of adapt to it. I don’t know, I guess it’s knowing how to implement it in your own practice” (CS - RT)</i>
Aligning a valued opportunity	Practitioners contextualise how a RTAP role may enhance patient access, improve service delivery, and/or augment the radiation therapist career pathway. Examples from elsewhere inform the process.	<i>“I guess depending on the role it can be something that actually. . . greases the wheels if you like, it makes things more efficient, it might help with, you know, patient access to service, and it just makes the whole system more efficient” (FG - RT)</i>

Table 2

Integrating radiation therapy advanced practice sub-category properties and illustrative data. CS = Case Study; FG = Focus Group; RT = radiation therapist; RTAP = radiation therapy advanced practitioner; RO = radiation oncologist.

Sub-Category	Properties	Illustrative Data
Managing uncertainty, being flexible	Leader practitioners strategically manage their own and others’ uncertainty to help position the RTAP role in the workplace. Flexibility is key to managing uncertainty, to actively accept change will be an ongoing facet of implementation, and to adapt conceptually and practically as this occurs.	<i>“I think one of the things that we’ve also had to develop is even just its place within the radiation therapy group, you know, and where that, and how that role fits. In all honesty I suppose we’re still, I don’t know that you ever come to a really neat little fence that goes around what the role does.” (CS - RT manager)</i>
Reconciling competing expectations	Practitioners individually and collectively attempt to reconcile competing personal, social and practical expectations associated with the RTAP concept, function, title and position; demands of service delivery and funding; and strategies being taken towards advanced practice implementation. The RTAP additionally attempts to reconcile competing expectations around a transitional professional identity. Where unresolved, competing expectations can be problematic for achieving implementation.	<i>“You know, we’ve been having issues with staffing numbers and. . . increased demand. . . increasing waiting lists. . . so a lot of our focus has been recently just on trying to manage the service and it makes it difficult to then look more strategically about where we want to go [with advanced practice].” (CS - RT manager)</i>
“Making it happen”	Leader practitioners initiate practical and creative strategies to implement a framework for advanced practice into the centre. Active and longer-term investment in such strategies, from leaders and the RTAP, is apparent where implementation has been achieved.	<i>“I actually think it’s all about mindset, and it’s all about the manager’s mindset. You know, if you want something to happen hard enough, you find a way to make it happen. . . I think it depends on where you place your priorities.” (CS - RT manager)</i>
Being supported by influential others	The RTAP needs practical and social support from influential others – primarily leaders and to a lesser degree peer RTs – to have the permission and validation to pursue advanced practice activities. Implementation is less likely to be achieved if support is not present.	<i>“I’d set up a meeting to talk about how it was going. . . I wanted feedback and I wanted, you know, assurances and I wanted to know that I was doing what was expected, but there was no expectation, you know. . . It was just a bit up in the air.” (CS - RTAP)</i>
Learning to become the RTAP	The RTAP needs a framework for learning, including time (immediate and longer term); access to learning opportunities; mentoring from experienced others; and validation of evolving practice. Clear expectations and supportive relationships are influential to learning outcomes.	<i>“I think that’s where. . . the training is good. Like someone alongside you, when things don’t go right, to see if you’re making the right decision. And I guess as I get more experienced in that. . . that’s where I will end up, being the person who does that” (CS - RTAP)</i>
Fitting in	Finding and accepting a new way of working where the RTAP is functional among and alongside other practitioners. Fitting in evolves over time as practitioner expectations of the RTAP role and outcomes align. Relationships are influential on this process.	<i>“[The RTAP will] be like a little terrier making sure that it gets through in time, and. . . sometimes I think that probably has caused friction a little bit. I think there was possibly a little bit of jealousy initially. . . but it’s always clear that [they’re] really doing things to get the patient treated faster. . . and that’s always very obvious.” (CS - RO)</i>
“Being different”	Practitioners attempt to manage the functional, structural and symbolic uncertainty associated with the RTAP being different from the RT. The perceived personal and professional impact of that difference, and the practical strategies used to reconcile the difference, can influence acceptance and implementation outcomes.	<i>“[A challenge], I would say. . . keeping currency in the day-to-day. You know, treating patients on the machines and doing all the normal things whilst maintaining all this activity. . . is a balance. And I can completely see why [the RTAP] needs to spend normal time on the machines and that kind of thing but I think that is, there’s always a bit of a tension there about.” (CS - RO)</i>
Adding value	Seeing valuable outcomes for service delivery associated with RTAP implementation can influence acceptance from practitioners and facilitate integration. Adding value also supports RTAP professional identity transition.	<i>“Well I think until you see how it works, until you work with it, you probably don’t really see the value in it. You can read about it, but I think until you actually do it and get it and you have a good person in the job. . .that’s also key” (CS - RO)</i>

The process of conceptualising advanced practice provided a blueprint for implementation; however, the concept was then required to regularly evolve as practice, expectations, and individuals changed, which in turn influenced integration strategies and outcomes. This resulted in a continual interplay between the processes of conceptualising and integrating radiation therapy advanced practice, albeit with varying outcomes dependent on the capacity of influential leaders (primarily the RT and RO managers) to strategically and actively adapt to ongoing uncertainty.

Leaders were essential to deliver a framework in which advanced practice was to be learned and actioned; actively manage uncertainty associated with conceptual diversity and competing

expectations; and in overtly championing the RTAP as a legitimate member of the radiation therapy team. Peer support from other RTs was not shown to be as important, as where peer support was absent the RTAP could still fully develop with the visible advocacy of leaders. Conversely, implementation of the RTAP in isolation of clear and active leadership strategies, positive relationships, and acceptance of RTAP legitimacy – from the RTAP and others – resulted in a problematic integration process.

The sub-category processes informing integrating radiation therapy advanced practice are presented in Table 2.

Table 3
 Becoming the radiation therapy advanced practitioner sub-category properties and illustrative data. CS = Case Study; FG = Focus Group; RT = radiation therapist; RTAP = radiation therapy advanced practitioner; RO = radiation oncologist.

Sub-Category	Properties	Illustrative Data
Legitimising identity as the RTAP	A personal and individual process of transition from being the RT to becoming the RTAP. The process is influenced by the perceived legitimacy of the changing role and actions being performed. External markers of legitimacy in title and validation by others influence the transitional process. Legitimacy is only achieved when the identity transition is accepted by the RTAP and is also conferred by external others.	<i>"I think in my case it may be... this old dog not willing to learn new tricks... I'm really comfortable with my role as an RT and happy to advance within that role and maybe I just wasn't broadminded enough to feel comfortable with the advanced practice idea." (CS – RTAP)</i>
Wanting to be different	The RTAP assimilates the personal meaning of pursuing a different work role, skill set and career pathway to that of the RT. Meaning can change over time influenced by the perceived personal and professional impacts of the integration process.	<i>"I really liked... the new learning more, and, you know, more education. I really like the autonomy of it, too, that I actually could be my own boss... and do what I needed to do." (CS – RTAP)</i>
Valuing outcomes	The perceived value of personal, service and patient related intended or actualised outcomes influence motivation to pursue the RTAP role and sense of legitimacy.	<i>"In the end I didn't really see the point in separating what they do and what I did. I didn't see the point in combining it. I didn't believe in... the advanced practice role... I couldn't see the benefit." (CS-RTAP)</i>
"Working hard at it"	Within the framework of supportive influential others, the RTAP actively and intentionally demonstrates capacity, motivation and drive to perform the advanced practice role.	<i>"I think it's her drive to make it work because there was a lot of anti 'it's not going to work'." (CS-RO)</i>

Becoming the radiation therapy advanced practitioner

Influenced by integrating radiation therapy advanced practice actions, becoming the radiation therapy advanced practitioner is the process whereby each RTAP interprets and assimilates the personal and professional meaning of their transition from RT to advanced practitioner. The nature of a RT in relation to work role, task boundaries and career pathway was commonly understood. In contrast, the varied conceptual understanding of RTAP function and fit within the local and national context precipitated uncertainty of professional legitimacy. For the implementation of advanced practice to be progressed, the RTAP needed to actively integrate and accept their shifting and uncertain professional identity as being legitimate when compared to their identity as an RT.

Although an individual process, the actions of becoming the radiation therapy advanced practitioner were shown to be influenced by and to occur within a framework of perceived workplace structures and symbols, as well as the conferring of permission and acceptance by others. Navigating the uncertainty and discomfort of being in a 'liminal' space between professional roles was enabled by influential leaders overtly permitting legitimacy through advocacy, access and empowerment. Additionally, symbols of legitimacy such as a title and role description as well as the allowance of RTAP activities by peers further facilitated the process of becoming. Inversely, even where a RTAP was able to self-identify as such, in the absence of overt legitimate symbols framed by structural and social integration of advanced practice, complete implementation was not able to be achieved.

The sub-category processes informing becoming the radiation therapy advanced practitioner are presented in [Table 3](#).

Discussion

The grounded theory of navigating uncertainty situated within this research illustrates the challenges accompanying the implementation of radiation therapy advanced practice within Australia. Uncertainty associated with contextually defined conceptual, practical, and social concerns was shown to influence the capacity for implementation strategies to progress, and practitioners needed to apply continuous strategies to navigate uncertainty to achieve desired outcomes. Formal provisions such as the ASMIRT advanced practice accreditation framework [5] and industrial award structures were not demonstrated to inform implementation strategies in a meaningful way, and it could be argued that workplace mod-

elling and funding structures [43] that do not include a place for RTAP contribute to uncertainty. Locally established creative strategies to flexibly and actively manage uncertainty and find a legitimate place for the RTAP, particularly when advocated by leaders, were shown to be critical for achieving the desired implementation outcome. This suggests the current state of advanced practice implementation in Australia is reliant on the creative capacity of centre leaders to progress despite ambiguous and sometimes conflicting expectations - implementation strategies are contextually derived and approached variably between centres, and there is a need for a more informed systematic approach if national implementation is to be achieved.

To date, studies reporting the integration of radiation therapy advanced practice have been primarily directed towards evaluating RTAP skills and outcomes within single centres, with few reporting the implementation strategies used. Two commentary papers [44,45] have presented the implementation experience from single centres in Canada, and although some local contextual elements were explored the effectiveness of implementation strategies on subsequent outcomes has not been analysed. On a larger scale, Harnett and colleagues [46–48] have reported the regional implementation and validation of RTAP across multiple centres. Although the overarching strategies presented in the series of papers is of value to inform similar implementation approaches, considering the contextual challenges expressed within this research the applicability to the Australian environment is unclear.

In regards to other health professions, Bryant-Lukosius and colleagues [49] reported several factors influencing the inconsistent implementation of advanced nurse practitioners, including variable understanding of terminology and role definitions; environmental interdependence; and a lack of systematic implementation according to patient-centred need. In a subsequent paper, Bryant-Lukosius and DiCenso [50] proposed the participatory action-research based PEPPA framework to inform the implementation of advanced nurse practitioners. The framework promotes a patient-centred, systematic approach to implementation, including wider stakeholder engagement and evidence-based outcomes. An adaptation of the PEPPA framework within a physiotherapy advanced practitioner implementation study [51] presented the key steps as engaging stakeholders; identifying barriers and enablers; developing appropriate education and role descriptions; and implementing an evaluation framework.

Using an implementation strategy may enable a systematic approach, however other literature has reported the influence

social integration may have on outcomes. Jones [52] reported a systematic review and meta-synthesis of specialist and advanced nursing practice roles into hospital settings and identified relationships with others and role ambiguity as highly influential to implementation success. Sangster-Gormley and colleagues [53] conducted an integrative review of advanced practice nursing roles implementation in Canada and added that prior experience of the practitioner and role acceptance were also influential. The authors concluded that a defined role, stakeholder engagement and acceptance were the key features to address for successful implementation, however, they further identified that the complexity of different work and social contexts imply that addressing these concepts may require a varied approach [54]. A ten-year longitudinal study of a consultant radiographer framework has also highlighted the flexibility required for successful implementation of an advanced role [55].

The impact of social acceptance and power on implementation strategies has been explored in the health workforce redesign literature. It has been suggested that “even small numbers of key local opinion leaders [can be] major obstacles to change”[56], and that strategic management of professional relationships are vital for effective change implementation [57]. Within this research, the influence of powerful others – although research participants used the term ‘support’ – was demonstrated to impact the viability and sustainability of radiation therapy advanced practice integration, as well as influence the legitimacy of RTAP professional identity. For advanced practice outcomes to be sustained, leaders need to deliver a contextually valid implementation strategy that frames permission and advocacy for the RTAP to function. Furthermore, visible advocacy will grant professional legitimacy to the RTAP which may support the transition of professional identity [58,59], although inter- and intra-professional identity protectionism may still influence integration processes [60].

This research has shown the implementation of radiation therapy advanced practice in Australia is complex, disordered, and precarious, currently dependent on the creativity and flexibility of leaders, resilience of the RTAP, and acceptance of others to progress. In addition to a framework for professional recognition, guidelines from the professional body to inform evidence based advanced practice implementation strategies, similar to that provided in other jurisdictions [61], may go some way to mitigating uncertainty. Advocacy from influencers, particularly the radiation oncology arm of the Royal Australian and New Zealand College of Radiologists, may assist the legitimacy of advanced practice pursuits. Although State based award structures and national funding models are more difficult to change, consideration to include RTAP in radiation therapy workforce models may assist leaders to find a way forward. Furthermore, development of an endorsement category by the Medical Radiation Practitioners Board of Australia to work alongside accreditation from the professional body, similar to that introduced for nurse practitioners [62], may also enable progress. Structural changes aside, the contextual social acceptance of the RTAP is essential to successful integration and must be acknowledged and openly strategised by leaders seeking advanced practice implementation.

Limitations

It is acknowledged that a limitation of this research may have been the inadvertent preclusion of a case study site in the second phase that could have been of value to the research aim. Case study sites were selected according to being professionally known to the researcher; that would be of perceived value to achieving the research aim; and pragmatically to enable data collection within the limitations of a funding grant. The sampling method cannot claim to achieve full representation of the potential cohort of cen-

tres with an interest (or disinterest) in advanced practice, however this was actively managed by seeking centres that represented contextual breadth; comparative analysis with national focus group data; and using theoretical sampling methods.

Conclusion

This research has demonstrated the pathway to radiation therapy advanced practice in Australia is not a clear one. However, the challenges associated with navigating uncertainty presented in this research have been effectively accommodated by some practitioners – this presents an opportunity to share these experiences with others to inform flexible and creative approaches. Although the implementation of advanced practice will always be contextual, there is a need for a national framework of systematic and shared implementation strategies that recognise structural and social necessities if broader outcomes are to be accomplished.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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