Victorian Medical Radiation Practitioners Education Trust

VMRPET - Grant Recipient Abstracts
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Transition to practice during a pandemic: Exploring the experiences of radiation therapist graduates.
- Dr Kristie Matthews

Literature suggests that the transition to practice experience of health practitioner graduates can be particularly stressful during the first six months of working, influenced by increased accountability, unclear expectations of the work role, and the social culture of the workplace. However, an examination of the transition to practice experience of radiation therapist graduates specifically is absent in the published literature. There is a need to better understand the radiation therapist graduate transition to practice experience to inform the implementation of strategic support mechanisms, immediately beyond the impact of the Covid-19 pandemic, and into the future.

This qualitative research study aimed to explore the transition to practice process of radiation therapist graduates in the context of the Covid-19 pandemic. Radiation therapy graduates entering qualified practice during 2022-2023 were invited to participate in a 9-month longitudinal study. Participants engaged in a focus group within the first months of qualified practice, and then self-recorded audio diary reflections for approximately 6 months. Participants additionally completed an exit interview.

Using a constructivist grounded theory methodology, data analysis has revealed that the transition to practice experience is a complex process of building confidence towards becoming the radiation therapist. Social connections and support from experienced others and peers are important, as to is fitting in to the workplace. Navigating expectations can be challenging during the transitional process.

This study will enable better understanding of the transition to practice experience of radiation therapist graduates and inform the development of a framework to guide a more effective transitional outcome.

Evaluation of the radio-density of dental prosthesis and restorations for head and neck radiation therapy treatment planning.
- Dr Daniel Sapkaroski

Radiation therapy (RT) is a critical modality in the management of head and neck cancer, relying on precision identification and delineation of tumour and adjacent healthy tissues on diagnostic imaging to optimise RT efficacy. Dental prosthetic materials have the potential to cause image artefact, significantly compromising the computed tomography (CT) scan quality and the ability to identify and delineate these critical structures. Furthermore, this compromises the ability to accurately calculate and predict radiation dose deposition to enable the best chance of tumour

control and while minimizing radiation induced toxicities to surrounding healthy tissue. Understanding the radio-density of specific, universally-used prosthetic materials, enabling differentiation of restorative materials from surrounding tumour and normal tissues, enables a greater understanding of the impact of image artefact on the quality of the RT treatment planning.

This study aims to measure the radio-density of all commonly used prosthetic dental materials and establish a standard radio-density table of prosthetic materials to support the optimization of precision planning and delivery of head and neck cancer radiotherapy.